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ABSTRACT

These medical assistant instructional materials include 28 instructional units organized into sections covering orientation: anatomy and physiology, related disorders, disease, and skills: office practices: and clinical practices. Each unit includes eight basic components: performance objectives, suggested activities for teachers, information sheets, assignment sheets, job sheets, transparency masters, tests and answers to tests, and assignment sheets. (Depending on specific objectives, transparency masters, assignment sheets, and job sheets may or may not be included in a given unit.) Topics covered in individual units include orientation, the Health Occupations Students of America, career success, body planes and cavities, nutrition, individual body systems, medical terminology, human relations and communications, medical law and ethics, secretarial procedures, business procedures, basic medical assistant skills, surgical asepsis, instrument use, dressing application, basic laboratory tests, pharmacology, administering medications, emergencies, and first aid. (MN)

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ED203175

HEALTH OCCUPATIONS EDUCATION

Medical Assistant

CE 029 343

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Medical Assistant

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Developed by the
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Oklahoma State Board of Vocational and Technical Education
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1981

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MEDICAL ASSISTANT

TABLE OF CONTENTS

Section A--Orientation

Unit I Orientation 1-A
Unit II HOSA 41-A
Unit III Career Success 77-A

Section B--Anatomy and Physiology, Related Disorders, Diseases, and Skills

Unit I Body Planes and Cavities 1-B
Unit II Microbiology and Bacteriology 41-B
Unit III Disease Process 93-B
Unit IV Digestive System and Basic Nutrition 131-B
Unit V Reproductive System 183-B
Unit VI Urinary System 241-B
Unit VII Muskuloskeletal System 263-B
Unit VIII Respiratory System 327-B
Unit IX Integumentary System 371-B
Unit X Nervous System 403-B
Unit XI Special Senses 437-B
Unit XII Circulatory System 481-B
Unit XIII Hematology 517-B
Unit XIV Endocrine System 553-B

Section C--Office Practices

Unit I Medical Terminology 1-C
Unit II Human Relations and Communications 31-C
Unit III Medical Law and Ethics 85-C
Unit IV Secretarial Procedures 113-C
Unit V Business Procedures 179-B

Section D--Clinical Practices

Unit I Basic Medical Assistant Skills 1-D
Unit II Surgical Asepsis, Instrument Use, and Dressing Application 61-D
Unit III Basic Laboratory Tests and X-Rays 111-D
Unit IV Pharmacology 135-D
Unit V Administration of Medications 173-D
Unit VI Emergencies and First Aid 253-D

FOREWORD

We believe that the most effective way to improve vocational education is through sound instructional materials. *Medical Assistant* is designed to provide the basic knowledge and skills for preparing "job-ready" medical assistants, and focuses on the following areas: Orientation; Anatomy and Physiology, Related Disorders, Diseases, and Skills; Office Practices; and Clinical Practices.

In Oklahoma, Vocational Medical Assistant Programs are designed for one academic year. The theoretical aspect of this curriculum should provide content necessary for students to be able to make judgments regarding the procedures they are expected to perform and to anticipate the physician's needs during procedures which are usually performed in medical offices. We feel that this material represents the academic aspects of the subject as well as practical application.

We are especially pleased that the involvement and support of physicians and other medical personnel was strong and enthusiastic during the development of this manual. The knowledge and expertise shared by these persons and the instructors in our programs provided the input necessary to produce this quality curriculum. The combination of technical content and the components of application will insure that students begin work as competent medical assistants.

We believe that *Medical Assistant* will assist instructors to improve their programs by providing a consistent, realistic, and comprehensive guide to educate students in a time-honored profession.

Francis Tuttle, State Director
State Department of Vocational and
Technical Education

Mary Randall, State Supervisor
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Technical Education

PREFACE

The purpose of *Medical Assistant* is to prepare students to function effectively and safely as members of the medical health team and to be able to perform procedures concerned with diagnosis, treatment, and education of patients in a medical office or clinical setting. The well-trained medical assistant will be an invaluable asset to any medical office, physician, and patient/client who seeks medical services.

The Medical Assistant Program is a comprehensive course that combines basic knowledge with applied skills mastered in the classroom and clinical laboratory. Students are able to put theory into practice as they are placed in medical offices to work under the supervision of the physician and experienced medical personnel. With this experience, the student gains confidence and expertise that is necessary to become a qualified medical assistant.

More and more, the medical assistant is becoming the physician's right hand. The physician is dependent on his or her capabilities in keeping the office running smoothly. Instructors need to prepare the student for the realistic role of the medical assistant by using the most up-to-date curriculum, where application is an integral component. The *Medical Assistant* curriculum is an excellent source of instructional information that will improve programs and assist in preparing the student for an exciting and rewarding profession.

Jamee Reid Sloan
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7

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Appreciation is expressed to the staff members in the Graphics Division of the State Department of Vocational and Technical Education for their services offered during the development and publication of the *Medical Assistant* curriculum.

USE OF THIS PUBLICATION

Instructional Units

Medical Assistant includes four sections and twenty-eight instructional units. A standard format was established in 1970 for development of instructional materials for all Oklahoma vocational teachers. This format includes eight basic components which form a unit of instruction: performance objectives, suggested activities for teacher, information sheets, assignment sheets, job sheets, transparency masters, tests, and answers to tests and assignment sheets. Depending on the specific objectives, transparency masters, assignment sheets, and job sheets may or may not be included in the unit of instruction.

All of the unit components "zero in" toward measurable and observable learning outcomes. Teachers are encouraged to supplement, personalize, localize, and motivate with these materials in order to develop a complete teaching-learning process.

Units of instruction are designed for use in more than one lesson or class period of instruction. Careful study of each unit of instruction by the teacher will help him or her determine:

A. Amount of material that can be covered in each class period
B. Skills which must be demonstrated
  1. Supplies and equipment needed
  2. Amount of practice needed
  3. Amount of class time needed for demonstrations
C. Supplementary materials, such as pamphlets and filmstrips, that must be ordered
D. Resource people who must be contacted

Performance Objectives (white pages)

Each unit of instruction is based on the performance needed for successful employment in an occupational area. Performance objectives are stated in two forms: unit objectives, stating the subject matter to be covered in a unit of instruction, and specific objectives, stating the performance necessary to reach the unit objective.

Since the objectives of the unit provide direction for the teaching-learning process, it is important that the teacher and students have a common understanding of the intent of the objectives. Following is a list of performance terms, their meanings, and behavioral synonyms which may have been used in this material.

A. Name--The individual supplies a name for objects, events, or people

Behavioral synonyms: Label, list, letter, record, reiterate, repeat, write

B. Identify--The individual selects a named, described, or pictured object by pointing to it, touching it, picking it up, or selecting it

Behavioral synonyms: Select, mark, match, choose, judge

C. State a rule--The individual communicates a relationship or principle which could be used to solve problems or perform a task

D. Apply a rule--The individual supplies an answer to a problem by using a stated relationship or principle

Behavioral synonyms: Solve, calculate

E. Describe--The individual relates sufficient characteristics or properties of an object or event so that a second individual will be able to state what is being discussed

Behavioral synonyms: Define, discuss, interpret, recite, tell how, tell what happens when

F. Distinguish--The individual selects an object or event from two or more which are easily confused

Behavioral synonyms: Discriminate, differentiate

G. Order--The individual arranges three or more objects or events in a sequence based on a stated property

Behavioral synonyms: Arrange, sequence, list in order, classify, divide, isolate, sort

H. Construct--The individual makes a physical object, a verbal statement, or a drawing

(NOTE: Construct is used when the finished product or result is important.)

Behavioral synonyms: Draw, make, build, design, formulate, reproduce, transcribe, convert, put together, compile

I. Demonstrate--The individual performs several operations necessary to carry out a specified process

(NOTE: Demonstrate is used when it is desirable to watch the student perform a task, one of the highest levels of student performance.)

Behavioral synonyms: Show your work, show procedure, perform an experiment, perform the steps, operate, remove, replace, turn off/on, (dis)assemble, (dis)connect

The objectives should be provided for students and stressed throughout the teaching-learning process. This will help answer any questions concerning performance requirements for each instructional unit. The objectives can also help determine teaching strategies and instructional methods. Prepare for each unit by deciding how each objective can best be taught.

The objective sheet may be also used as a quick pretest to determine prior knowledge of students and if further study or activities are necessary. Teachers should feel free to modify, delete, or add objectives in order to meet the needs of the students and community. When changes in objectives are made, the teacher should remember to supply the needed information, assignment and/or job sheets, and criterion test items.

Suggested Activities (pink pages)

This component is included only in teacher material. The suggested activities page assists users during the preparation stage of the teaching-learning process by providing suggestions for delivery and/or presentation during the instructional process. Read the suggested activities before teaching the units so supplemental materials can be obtained, audiovisual materials prepared, and outside resources contacted. Duties of the teacher will vary according to the particular unit.

The references that are listed are ones used in the development of each unit. They should be used by the teacher to supplement her or his knowledge of the subject area or to help students with particular interest or occupational objective in the area covered.

Information Sheet (green pages)

The information sheet provides "must know" content essential for meeting the cognitive (knowledge level) objectives of the unit. The information is written in a topical outline form and is keyed to the specific objectives.

Teachers will find that the information sheet serves as an excellent guide for presenting the background knowledge necessary to develop the skills specified in the unit objective. The information sheet may also be used for coordination activities and advisory committees.

Students should read the information sheet before the information is discussed in class. Space is provided in margins for students and teachers to add notes that supplement, localize, personalize, and provide motivation for each unit.

Transparency Masters (white pages in teacher material and green in student material)

Transparency masters provide information in a special way. The students may see as well as hear the material being presented, thus reinforcing the learning process. Transparencies may present new information or they may reinforce information presented in the information sheet. They are particularly effective when identification is necessary.

Transparencies should be made and placed in the notebook where they will be immediately available for use. Transparencies direct the class's attention to the topic of discussion. It is recommended that teachers stand away from the overhead projector when discussing transparency material to avoid speaking too loudly.

Assignment Sheets (brown pages)

Assignment sheets give students a chance at problem solving, self-assessment, and/or practical experience with the information. They assist students in the application of knowledges which are necessary prerequisites to skill development. These may be given to the student for completion in class or used for homework assignments. Answer sheets are provided when appropriate and can be used by the student and/or teacher for checking student progress.

Job Sheets (blue pages)

Job sheets are another important segment of a unit of instruction. The job sheets provide a list of equipment, tools, and materials needed to complete a manipulative or psychomotor skill. They describe a step-by-step procedure needed to complete each task or job. Diagrams, photographs, and illustrations are provided to assist students in achieving the skill.

Instruments in job sheets are not in order of use. This should be taught in the classroom. In this way, students will not depend entirely on job sheets for instrument setup.

A teacher should demonstrate to students the procedures outlined in each job sheet. Furthermore, the teacher needs to localize the job sheet accordingly to the equipment and supplies available in the local lab or shop situation. Job sheets also furnish potential employers with a picture of the skills being taught and the performances they might reasonably expect from a person who has had this vocational instruction.

Tests (yellow pages)

This component provides criterion-referenced evaluation of every objective listed in the unit of instruction. It is crucial to note that both paper-pencil and performance objectives must be evaluated.

The tests may be written or oral. It is recommended that the tests be divided into shorter tests covering three or four objectives at a time and given soon after those objectives have been covered. A selection of questions from the units covered may be used for final tests at the end of each term if desires. If objectives have been added, deleted, or modified, be sure to make the changes on the test.

The acceptable response on a unit test, 85 percent in most units, may be raised or lowered to fit the topic or students' ability levels. The percentage applies to the overall score, not to each individual question. The final unit grade should be obtained by using the "paper-pencil" score along with evaluations of participant demonstrations of the desired skills.

Answers to Test and Assignment Sheets (pink pages)

These components are designed to assist the teacher in evaluation of student performances.

Page Numbering

Each publication from the Curriculum and Instructional Materials Center is assigned a specific abbreviation. For example, *Medical Assistant* has been abbreviated MA. The units are then numbered consecutively within the book. An example of a page number is MA - 1-A. Since CIMC publications are loose leaf, this system of page numbering was adopted so pages from different manuals would not get mixed up.

Methods of Disseminating Material

Material may be given out a unit or page at a time to keep the material before the students always new. Some teachers ask students to furnish a three-ring binder for the units while studying a particular unit. This is more convenient for taking the material home to study. Each unit is then placed in the larger binders upon its completion. The large binders may be purchased at cost from the CIMC. Some teachers have stored the materials by units in filing cabinets or boxes until needed for use. All the units may be given out at once if desired.

Student materials should be provided for each student for best results. They may be purchased in-state for less than a teacher can reproduce the materials, especially when the teacher's time is considered. Student materials contain everything but the test answers, answers to assignment sheets, and suggested activities. The tests are collated all together at the back of student material and should be removed and stored until needed. The students should be allowed to take their materials home at the end of the year.

Teaching Methods

It is a challenge to keep students motivated. Supplement the objectives by providing the "why," personal experiences, and current information. Prepare for each unit by deciding how each objective can best be taught. Allow students to become involved in preparing and planning.

ORIENTATION
UNIT I

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply information concerning the role and functions of the medical assistant to preparing for this career. The student should also be able to evaluate personal habits and research job opportunities for the medical assistant. This knowledge will be evidenced through completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the orientation of the medical assistant to the correct definitions.
2. List characteristics of the well-groomed medical assistant.
3. Match personal qualities needed by the medical assistant to the correct definitions.
4. State ways to show respect for others.
5. List administrative functions of the medical assistant.
6. Select from a list common clinical or medical functions of the medical assistant.
7. Describe medical assistant training programs.
8. Distinguish between a "job" and a "career."
9. Evaluate personal habits.
10. Check personality traits.
11. Complete self-analysis.
12. Research job opportunities.
13. Complete word search.

ORIENTATION
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

- A. Provide students with objective sheet.
- B. Provide students with information and assignment sheets.
- C. Discuss unit and specific objectives.
- D. Discuss information and assignment sheets.
- E. Provide information and resource materials for students to complete assignment sheets.
- F. Reinforce learning of objective three by playing Word Search, Assignment Sheet #5.
- G. Invite resource persons to speak to students on the different specialty areas in which they may work as a medical assistant.

  Examples: OB-GYN, urology, neurology, orthopedics, private and hospital clinics, emergency out-patient clinics, ophthalmology, family practice clinics
- H. Invite uniform shops to show new lines of uniforms or hold a style show and have students model.
- I. Ask students to wear their uniform to class for a "Uniform Day" and check their appearance.
- J. Invite a former student who has been successful as a medical assistant to speak to class about her/his job and continuing education.
- K. Pull out section of newspaper with medical or health-related want ads. Highlight the jobs dealing with the medical office and place on bulletin board to keep students informed about job opportunites.
- L. Invite a cosmetic company representative to bring samples and provide demonstrations on wearing makeup attractively.
- M. Ask a hairstylist to visit class to speak on neat hairstyles and trimming and shaping beards and mustaches.
- N. Assign a poster or a bulletin board to be made by each student depicting who they are, likes, dislikes, ambitions, hobbies, and family. Ask them to give a three- to five-minute talk to introduce themselves to class.

  (NOTE: This is an excellent activity for the first week of class to allow members to get acquainted with each other.)

O. Take students to a meeting of the county or state Medical Assistant Association meeting.

P. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Assignment sheets

1. Assignment Sheet #1--Evaluate Personal Habits
2. Assignment Sheet #2--Check Personality Traits
3. Assignment Sheet #3--Complete Self-Analysis
4. Assignment Sheet #4--Research Job Opportunities
5. Assignment Sheet #5--Complete Word Search

D. Answers to assignment sheet

E. Test

F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

C. *Individual Instruction Units in Clothing.* Tony, Wisconsin: Homemaking Research Laboratories, 1976.

IV. Films:

A. "Good Looks/Here and Now." Color, 30 minutes, Modern Talking Pictures, 1973. Available from Modern Talking Pictures, 2323 New Hyde Park Road, New Hyde Park, New York 11040.

B. "You Pack Your Own Chute." Color, 30 minutes, Ramic Productions, 1972. Available from Ramic Productions, 4910 Birch, Newport Beach, California 92660.

(NOTE: The above films are available on a free-loan basis to Oklahoma teachers only from the Oklahoma State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 W. 6th, Stillwater, Oklahoma 74074. Out-of-state teachers must order films from addresses listed.)

C. "Let's Be Clean and Neat." Black and white, 11 minutes, Oklahoma State Department of Health, 1958. Available from Oklahoma State Department of Health, N.E. 10th Street and Stonewall, Oklahoma City, Oklahoma 73105.

ORIENTATION
UNIT I

INFORMATION SHEET

I. Terms and definitions

A. Medical Assistant (MA)--Individual who performs clinical and administrative procedures under the direct supervision of a doctor; works in physicians' offices, hospitals, and other medical settings which deliver health care to patients

B. American Association of Medical Assistants (AAMA)--Professional national organization of medical assistants; purposes are promoting welfare of patients, improving quality of health care, and providing educational materials and programs for members to upgrade their profession

(NOTE: Each state has its own organization and it is these members that make up the national organization.)

C. American Medical Association (AMA)--Professional organization of doctors of medicine formed to improve the quality of medical care and develop ethical standards for the profession

D. Certified Medical Assistant (CMA)--Medical assistant who takes and passes an exam developed by the AAMA to become certified in the profession

(NOTE: Assistants who successfully pass the basic exam may use the initials CMA after their name and may continue to take exams if they wish to specialize in such areas as clinical or administrative, [CMA-C or CMA-A] or both.)

E. *The Professional Medical Assistant*--Journal of medical assistant news and educational articles published by the AAMA to keep professionals up-to-date

F. Human relations--Getting along with people

(NOTE: Your personality and ability to relate to people is of utmost importance in the medical office. Your approach to communicating with patients, co-workers and your employer will determine your success in your job.)

G. Personality--All of the physical, mental, and emotional characteristics that make up a whole person

H. Respect--Recognizing the worth of self and the worth of other people, their property, and opinions

I. Attitude--Feeling or emotion

INFORMATION SHEET

II. Characteristics of the well-groomed medical assistant (Assignment Sheet #1)

A. Clean and neat hair

(NOTE: Hairstyle should be flattering but kept away from the face and out of the procedures that the MA will be doing. Hair is a carrier of bacteria and therefore must be kept as clean as possible.)

B. Light, attractive makeup

(NOTE: Wear just enough to enhance your appearance. Heavy makeup detracts from a clean appearance and may even rub off on your uniform, the equipment, or the patient.)

C. Clean teeth and fresh breath

(NOTE: Clean, healthy teeth are essential for a well-groomed MA. Mouthwash should be used after smoking or eating highly seasoned foods or the odor may be offensive to the patient.)

D. Little, or no cologne or perfume

(NOTE: Cologne or perfume worn in the medical office is discouraged to avoid offending patients who are ill or who may have allergies. A clean, fresh fragrance from daily bathing or showering with soap is highly recommended.)

E. Simple understated jewelry

(NOTE: Too much jewelry worn with a uniform is unprofessional and can even be dangerous. A dangling earring or bracelet can get caught on equipment and even patients. Jewelry can also be a carrier of bacteria. A wedding band with engagement ring and simple post-type earrings may be worn.)

F. Clean and well-fitting uniforms

(NOTE: Many offices still adhere to the white dress or pants uniform while others have gone to color-coordinated attire.)

G. Clean and well-fitting shoes and stockings

(NOTE: Well-fitting shoes are important to the MA who is constantly on the move. Duty shoes with good support are recommended. Wear white or beige stockings, making sure there are no runs, snags, or holes. If poor circulation in the legs is a problem, wear support hose.)

H. Short, clean, and smoothly filed fingernails with clear or light colored polish

(NOTE: Long, sharp fingernails are dangerous because they can injure patients and are carriers of bacteria. Dark polish is inappropriate for office wear and when chipped is more unattractive than light or clear polish.)

INFORMATION SHEET

III. Personal qualities needed by the medical assistant (Assignment Sheets #2 and #3)

A. Empathetic--To have an awareness of the feelings and emotions of another person and their meaning and significance

Example: After having a hysterectomy herself the medical assistant can understand the feelings of the patient who has just been told that this surgery must take place

(NOTE: Sympathy differs from empathy in that, the sympathetic person has a sensitivity to what another person is feeling, but can not relate it to their own feelings. They can only feel sorry for the experience that the other person is having.)

B. Dependable--To be capable of being trusted or relied upon

Example: You can be depended on to come in early if necessary to set up special trays or prepare for a treatment that will take place in the office

C. Honest--To be sincere and tell the truth

Example: You are capable and keep all records honestly

D. Tactful--To have skill and poise when dealing with others

Example: When dealing with a patient who has a long overdue bill, you are able to deal with the problem maturely, and with quiet efficiency

E. Professional--To conduct yourself with high standards of behavior

Example: A professional appearance means that your uniform is clean and neat, shoes are polished, hair and skin are clean, and you have good posture that shows pride in what you do

F. Ethical--To have a system of moral principles or standards of behavior

Example: The medical assistant has many confidences to keep about staff and patients. "In-house" information stays "in-house"

G. Self-motivated--To have a desire or the initiative to act on your own with little supervision

Example: Ordering supplies, managing correspondence before being asked, setting priorities, and carrying out tasks without being reminded to do so

INFORMATION SHEET

IV. Ways to show respect for others

(NOTE: The MA is usually the first contact the patient has with the medical office, either by phone or in person. The rapport that you develop with that person will set the tone for the type of communication that occurs throughout their contact with your office. Even though you sometimes encounter uncooperative, rude, belligerent, and sometimes obnoxious behaviors, you must treat people with the respect they deserve as human beings.)

A. Show understanding and appreciation for other people's feelings

B. Realize that other people's feelings make sense to them

(NOTE: People react to [illegible] in many ways. The person you may see out on the street healthy, happy, and productive, may behave completely different when trying to cope with illness.)

C. Be aware of other people's feelings as well as what they are saying

Examples: "I need an appointment NOW," may sound angry but they may actually be saying, "I am afraid of what is happening to me."

D. Show restraint with obnoxious people

(NOTE: You may have to bite your tongue, but it will pay off for you in the long run. Try to control your temper, smile, and be very tactful.)

E. Remember birthdays, special occasions, kindnesses shown, and troubled times with visits, cards, or some other token

(NOTE: Many offices keep birthdate files and send cards to patients on birthdays. It would be a good idea to keep a small file or notebook and list some important notes or dates special to a patient and inquire about families, pets, hobbies, and other items of interest to them.)

F. Help people feel at ease, important, and useful

G. Find something you can like in any person with whom you must get along

(NOTE: Working closely with people in an office is difficult at times, especially if you don't see eye-to-eye with one person all the time. The atmosphere in the office needs to be cordial and warm no matter what your feelings are about a person.)

H. Realize that every human being is a worthy individual

I. Return borrowed items and personal properties promptly to their correct places or owners

INFORMATION SHEET

J. Remember manners and common courtesies

(NOTE: Remember that words like *please* and *thank you* never go out of style.)

K. Put yourself or a loved one in that other person's place and consider how you would want to be treated

V. Administrative functions of the medical assistant

A. Send statements, process collections, and keep accounts and other financial records

B. Make appointments and receive patients

C. Maintain medical records, correspondence and reports, and file and fill out legal documents

D. Interview patients for medical histories; communicate in person and by telephone

E. Order and maintain supplies and equipment to be used in the office

F. Act as public relations manager for office

G. Complete insurance forms and instruct patients when they are filling out forms

Examples: Medicare, medicaid, worker's compensation

VI. Common clinical or medical functions of the medical assistant

A. Prepare patients and assist physicians in performing exams, treatments, and minor surgery

B. Sterilize and care for instruments and equipment

(NOTE: Many offices and clinics now use only disposable supplies. Proper methods of disposing of supplies after use should be carried out.)

C. Order and maintain permanent and disposable supplies

VII. Medical assistant training programs

A. Vocational program--Nine-month course that prepares students to be employed as medical assistants

B. Associate degree program--Two-year or 18-month course at the junior college level that prepares students to be employed as a medical assistants; if the program is approved by the AAMA, the student may then sit for certification exam

ORIENTATION
UNIT I

ASSIGNMENT SHEET #1–EVALUATE PERSONAL HABITS

NAME____ SCORE__________________

Good grooming is essential in any profession but especially so in a health field. Your personal appearance can set the atmosphere for your medical office. A clean, healthy-appearing medical assistant is an asset in any office where close patient contact is needed. With this in mind, complete the following chart and answer the questions that follow.

	Always	Most of the Time	Occasionally	Seldom or Never
BODY CLEANLINESS AND CARE				
Do you bathe at least once daily?				
Do you bathe soon after participating in strenuous activity?				
Do you use an effective deodorant daily?				
Do you keep your undergarments fresh and clean?				
POSTURE				
Do you Sit properly without slouching?				
Do you stand properly with chin up and shoulders back?				
Do you walk with your head held high and at a brisk pace?				
TEETH, MOUTH, AND BREATH				
Do you have a dental checkup at least once a year?				
Do you brush your teeth at least twice daily and try to floss at least once a day?				
Do you use a mouthwash as often as necessary to avoid bad breath?				

ASSIGNMENT SHEET #1

	Always	Most of the Time	Occasionally	Seldom or Never
Are you conscious of the fact that too much gum and sweets may be harmful to your teeth?				
HAIR				
Do you avoid combing or brushing your hair in public?				
Do you wash your hair often enough to keep it clean and shiny?				
Do you brush your hair daily?				
Do you wear your hair in a style that is becoming to you?				
Do you keep your brush and comb clean?				
If you have dandruff, have you tried a medicated shampoo or seen a doctor?				
FACE				
Is your skin clean and well cared for?				
Is your makeup natural-looking?				
Do you avoid applying makeup in public?				
Is your beard or mustache neatly trimmed?				
HANDS				
Do you refrain from biting your fingernails?				
Are your fingernails clean and trimmed to a moderate length?				

ASSIGNMENT SHEET #1

	Always	Most of the Time	Occasionally	Seldom or Never
CLOTHING				
Do you keep your clothes in good repair, that is, no ripped seams, no missing buttons, and no pins, tape, or staples in hems?				
Do your clothes look neat, clean, and pressed?				
Do your clothes fit properly?				
Do you wear clothes appropriate to the occasion?				
Do you wear shoes that fit properly?				
Do you keep your shoes brushed or polished and in good condition? (NOTE: Avoid overrun heels, scuffs, and lack of shoelaces.)				
Do you keep your outer garments free from dandruff, lint, etc.?				
Do you avoid using clothing as a means to rebel against school and parental authority?				
GENERAL HEALTH AND APPEARANCE				
Do you make an effort to eat a balanced diet each day?				
Do you watch your weight carefully and try to keep it at the recommended weight for you?				
Do you avoid "junk foods?"				
Do you avoid eating what you know is harmful to your complexion?				
If you had a serious skin problem, would you consult a dermatologist?				

ASSIGNMENT SHEET #1

	Always	Most of the Time	Occasionally	Seldom or Never
Do you get enough sleep each night?				
Do you have physical checkups regularly?				
Do you get sufficient physical activity?				
Are you absent no more than 1 1/4 days out of thirty because of illness?				
Do you choose clothes that are becoming to your body?				
Do you avoid extremes in styles?				

1. What are your strengths in personal grooming habits?

ASSIGNMENT SHEET #1

2. What areas of your personal grooming habits need improvement?

____

____

____

____

____

____

____

____

____

____

Adapted from Homemaking Research Laboratories. *Individual Instruction Units in Clothing.* Tony, Wisconsin, 1976.

ORIENTATION
UNIT I

ASSIGNMENT SHEET #2--CHECK PERSONALITY TRAITS

NAME________________________________ SCORE____________________

It is important not only to be your best self but to project a truthful image of your best self. Rate yourself on the following scale. Look up the meaning of any words which you don't understand. You may wish to repeat the process periodically to check on improvement.

Characteristics	Rating				
Sense of humor	5	4	3	2	1
Poised	5	4	3	2	1
Systematic	5	4	3	2	1
Courteous	5	4	3	2	1
Cooperative	5	4	3	2	1
Apathetic	5	4	3	2	1
Easily impressed	5	4	3	2	1
Pays attention	5	4	3	2	1
Determined	5	4	3	2	1
Extroverted	5	4	3	2	1
Practical	5	4	3	2	1
Creative	5	4	3	2	1
Patient	5	4	3	2	1
Alert	5	4	3	2	1
Perfectionistic	5	4	3	2	1
Pessimistic	5	4	3	2	1
Logical; reasonable	5	4	3	2	1
Leadership qualities	5	4	3	2	1
Impulsive	5	4	3	2	1
Sensible	5	4	3	2	1
Generous	5	4	3	2	1
Sociable	5	4	3	2	1
Tactful	5	4	3	2	1
Rude	5	4	3	2	1
Deceitful	5	4	3	2	1
Considerate	5	4	3	2	1
Sincere	5	4	3	2	1
Forgetful	5	4	3	2	1
Kind	5	4	3	2	1
Inhibited	5	4	3	2	1
Restless	5	4	3	2	1
Possessive	5	4	3	2	1
Irritable	5	4	3	2	1
Loyal	5	4	3	2	1
Selfish	5	4	3	2	1
Thoughtful	5	4	3	2	1
Independent; self-governing	5	4	3	2	1
Emotionally mature	5	4	3	2	1

ASSIGNMENT SHEET #2

Characteristics	Rating				
Self-control	5	4	3	2	1
Obeys rules	5	4	3	2	1
Perseverant	5	4	3	2	1
Economical	5	4	3	2	1
Jealous	5	4	3	2	1
Naive	5	4	3	2	1
Dependable	5	4	3	2	1
Stubborn	5	4	3	2	1
Critical	5	4	3	2	1
Optimistic	5	4	3	2	1
Easily depressed	5	4	3	2	1
Friendly	5	4	3	2	1
Positive	5	4	3	2	1
Ambitious	5	4	3	2	1
Conceited	5	4	3	2	1
Good natured	5	4	3	2	1
Honest	5	4	3	2	1
Sarcastic	5	4	3	2	1
Inferiority complex	5	4	3	2	1
Enthusiastic	5	4	3	2	1
Resourceful	5	4	3	2	1
Intellectual	5	4	3	2	1
Suspicious	5	4	3	2	1
Shrewd	5	4	3	2	1
Sympathetic	5	4	3	2	1
Emotional	5	4	3	2	1
Self conscious	5	4	3	2	1
Domineering	5	4	3	2	1
Argumentative	5	4	3	2	1
Broadminded	5	4	3	2	1
Efficient	5	4	3	2	1
Introverted	5	4	3	2	1
Modest; humble	5	4	3	2	1

ORIENTATION
UNIT I

ASSIGNMENT SHEET #3--COMPLETE SELF-ANALYSIS

NAME_______________________________ SCORE_______________

Answer the following questions as they apply to your job and/or classroom experiences honestly by checking the most appropriate column. Then analyze the statements checked "Sometimes" and "Never."

	Never	Sometimes	Always
Are you able to act naturally under all circumstances?			
Do you seek opportunities to meet those in positions of authority?			
Do you avoid criticizing others?			
Are you able to give credit to others for what they do, rather than to obtain credit for yourself first?			
Do you try to have a positive attitude?			
Do you have bad breaks?			
Do you approach your work confidently?			
Do you think your friends are more capable than you are at most things?			
Do you try to improve your attitudes?			
Do you feel others are luckier than you are?			
When you fail, do you come right back?			
Do you treat patients and co-workers as though they were important?			
Do you expect to succeed?			
Are you honest?			
Are you willing to accept more responsibility on your job?			
Are you free from bad habits which will interfere with your progress?			

ASSIGNMENT SHEET #3

	Never	Sometimes	Always
Do you discharge your duties promptly and efficiently and with little or no supervision?			
Do you finish the things you start?			
Do you feel your present job can help you in your future career?			
When you see your friends succeed, do you wish you were doing what they are?			
Do you feel that limitations are things you put on yourself?			
Do you try to appreciate, understand, and show a sincere interest in patients and co-workers?			
Do you try to learn as much as you can at work?			
At work, do you try to be a real service to people on the job?			
Do you work to be free from superstitions and prejudices?			
Do you listen attentively to what people say without interrupting them?			
Do you observe closely what is going on around you and understand the significance of it?			
By reading and studying, do you keep informed about current events, your work, your future career, and subjects of popular interest?			
Can you be depended upon to keep your promises to patients and co-workers?			
Are you loyal to your employer?			
Do you work toward your goals?			
Do you measure success by money?			
Do you try to achieve one goal at a time?			
Do you believe we become what we think about, what we concentrate on achieving?			

ASSIGNMENT SHEET #3

	Never	Sometimes	Always
Do you believe the most useful goals are specific goals?			
Do you feel successful people do not have problems?			
Do you worry about past mistakes and failures?			
Do you control your temper?			
Do you often feel enthusiastic about something you wish to do?			
Are you able to make decisions about everyday things easily?			
Are you able to interest yourself in the details of your job?			
Are you careful not to hold grudges against people?			
Do you usually look on the bright side of situations?			
Are you able to work pleasantly with others?			
Do you believe that we receive rewards by giving service to others?			
Do you try to find ways to help other people at work?			
Do you find your dealings with others at work very frustrating?			
Do you try to be cooperative?			
Do you avoid carrying tales and gossiping about others?			
Do you try to see the other person's point of view?			
Do you refrain from telling others what you think of them?			
Do you avoid arguments?			
Do you avoid making fun of others?			

ASSIGNMENT SHEET #3

	Never	Sometimes	Always
Do you keep out of other people's business?			
Do you avoid finding fault with everyday little things?			
Do you keep your personal troubles to yourself on the job?			
Do you feel honesty is the way to success?			
Do you really enjoy your work?			
When you feel "down" do you try to work harder?			
Do you think about others on special occasions, such as their birthdays and in sorrow and happiness, and do you send them some expression of your thoughts?			
Do you congratulate your friends upon their achievements?			
Do you learn, remember, and use the names of the people you meet?			
Do you know the rules of etiquette and observe them?			
Do you think about the rights of others before you think of your own?			
Do you show respect for everyone regardless of their position?			
Are you appreciative for everything someone does for you and do you always thank them?			
Do you believe people who work hard make it unnecessarily difficult for others?			
Do you try to improve?			
Do you want to be like you present friends?			
Do your friends try to operate at their best potential?			
Do you realize how much your friends influence your achievements?			

ASSIGNMENT SHEET #3

	Never	Sometimes	Always
Are you well-groomed?			
Do you do just enough to get by?			
Do you smile often?			
Do you really know that you are a unique and valuable person?			
Do you think about exciting possibilities in your future work?			
Do you try to improve your human relations skills?			
Do you feel you are mature in your attitudes, outlook, and actions?			
Do you try to see yourself as others see you?			
Do you feel you could increase your productivity at work?			
Do you feel wanting money is wrong?			
Do you believe there is any value in accumulating wealth?			
Do you believe how much money we earn is determined by how hard it would be to replace us?			
Do you feel it is wrong for your employer to make a profit?			
Do you try to make every day count?			
Do you jump from one thing to another when trying to accomplish things?			
Do you try to plan your time wisely?			
Do you believe that for every effect there is a cause?			
When there is a problem at work or at school, do you try to be part of the solution?			
Do you get impatient with others?			

ASSIGNMENT SHEET #3

	Never	Sometimes	Always
Do you feel you will be rewarded in some way if you do well at work or at school?			
Do you refrain from exaggeration?			
Do you avoid flattering people for personal gain?			
Do you try to avoid embarassing others?			
Do you return what you borrow to its proper place?			
Do you accept at least partial blame for failures when you deserve it?			
Do you respect your parents, elders, employers, and people in authority?			
Do you have a tendency to try to top a remark made by a previous speaker during a conversation?			
Are you usually ill at ease with strangers?			
Are you critical and bossy?			
Do you ridicule people who are not present?			
Do you laugh at others' mistakes?			
Are you suspicious of other people's motives?			
Do you avoid talking about yourself, what you own, and your successes?			
Do you use belittling words and jokes about those with different sex, race, politics, religion, and beliefs?			
Do you believe that successful people frequently ask themselves, "How can I give more service to others?"			
Do you use illness as an excuse for not doing well on a job?			
Do you try not to prejudge patients?			

ORIENTATION
UNIT I

ASSIGNMENT SHEET #4--RESEARCH JOB OPPORTUNITIES

NAME______________________________________ SCORE________________

There are many types of health facilities where the qualified medical assistant can find employment. The expanded role of the MA changes frequently as technology advances and more responsibilities are assumed. Using the newspaper ads, employment agencies, personnel offices or on your own, research at least two job opportunities in your community. Look for job description, qualifications, salary and benefits. Describe your findings below and share with classmates.

1. a. Job description

____

____

____

b. Qualifications

____

____

____

c. Salary

____

____

____

d. Benefits

____

____

____

2. a. Job description

____

____

____

ORIENTATION
UNIT I

ASSIGNMENT SHEET #5--COMPLETE WORD SEARCH

NAME____ SCORE__________________

Search out and circle words listed below that describe other attitudes needed by the medical assistant. Be able to give an example of what each attitude would mean in a medical situation. Words may be found vertically, horizontally, or diagonally.

B	O	O	R	D	P	E	C	I	V	L	W	B	A	E	O	I	C	M	E	S
I	R	E	S	P	E	C	T	F	U	L	N	E	P	O	R	E	C	D	R	T
A	E	N	I	C	R	O	D	J	O	B	I	S	N	C	A	R	D	J	O	B
C	A	T	S	F	L	U	S	H	T	E	A	B	O	C	R	T	P	F	I	L
D	O	H	I	S	U	R	E	C	K	N	A	I	T	L	O	Y	A	L	O	C
V	E	U	A	N	D	T	R	A	K	I	I	E	W	L	E	A	C	O	P	M
F	U	S	S	Y	O	E	J	A	E	I	M	D	S	E	I	K	A	D	D	E
J	A	I	T	E	I	O	N	V	I	O	E	R	M	E	N	T	O	R	A	T
E	C	A	M	I	S	U	H	E	I	T	A	E	A	L	R	E	A	L	S	I
T	I	S	S	E	L	S	A	M	S	R	A	C	E	R	U	R	E	C	I	C
W	A	T	I	R	O	N	P	E	B	O	R	C	K	E	L	B	A	R	K	S
E	V	I	N	T	R	A	R	E	D	C	A	S	T	E	R	O	I	L	E	D
W	E	C	K	I	D	E	T	N	A	E	D	B	O	F	F	E	L	D	A	S
R	E	A	D	E	T	O	R	I	A	L	I	V	E	S	U	P	P	A	R	T
L	O	Y	A	N	D	T	O	C	O	A	D	O	V	E	R	L	A	S	T	E
E	R	A	I	T	P	I	L	L	C	T	I	V	E	W	I	T	H	O	U	T
P	A	P	E	R	C	H	C	O	O	P	E	R	A	T	I	V	E	A	S	E
J	U	S	T	O	R	C	L	I	N	E	O	R	O	C	K	F	U	L	L	S

Loyal

Enthusiastic

Tactful

Respectful

Cooperative

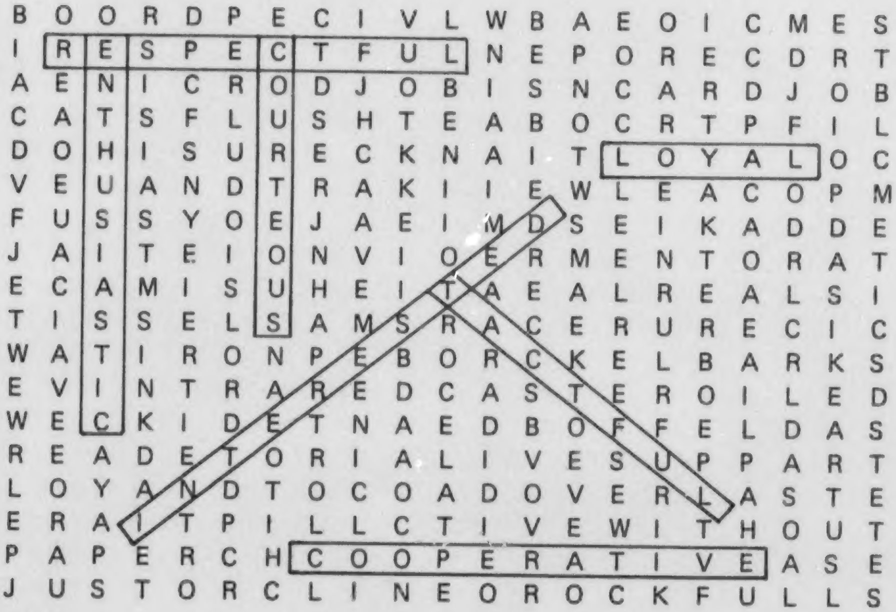
Interested

Courteous

ORIENTATION
UNIT I

ANSWERS TO ASSIGNMENT SHEET

Assignment Sheet #5



B	O	O	R	D	P	E	C	I	V	L	W	B	A	E	O	I	C	M	E	S
I	R	E	S	P	E	C	T	F	U	L	N	E	P	O	R	E	C	D	R	T
A	E	N	I	C	R	O	D	J	O	B	I	S	N	C	A	R	D	J	O	B
C	A	T	S	F	L	U	S	H	T	E	A	B	O	C	R	T	P	F	I	L
D	O	H	I	S	U	R	E	C	K	N	A	I	T	L	O	Y	A	L	O	C
V	E	U	A	N	D	T	R	A	K	I	I	E	W	L	E	A	C	O	P	M
F	U	S	S	Y	O	E	J	A	E	I	M	D	S	E	I	K	A	D	D	E
J	A	I	T	E	I	O	N	V	I	O	E	R	M	E	N	T	O	R	A	T
E	C	A	M	I	S	U	H	E	I	T	A	E	A	L	R	E	A	L	S	I
T	I	S	S	E	L	S	A	M	S	R	A	C	E	R	U	R	E	C	I	C
W	A	T	I	R	O	N	P	E	B	O	R	C	K	E	L	B	A	R	K	S
E	V	I	N	T	R	A	R	E	D	C	A	S	T	E	R	O	I	L	E	D
W	E	C	K	I	D	E	T	N	A	E	D	B	O	F	F	E	L	D	A	S
R	E	A	D	E	T	O	R	I	A	L	I	V	E	S	U	P	P	A	R	T
L	O	Y	A	N	D	T	O	C	O	A	D	O	V	E	R	L	A	S	T	E
E	R	A	I	T	P	I	L	L	C	T	I	V	E	W	I	T	H	O	U	T
P	A	P	E	R	C	H	C	O	O	P	E	R	A	T	I	V	E	A	S	E
J	U	S	T	O	R	C	L	I	N	E	O	R	O	C	K	F	U	L	L	S

ORIENTATION
UNIT I

TEST

NAME ________________________________ SCORE ____________

1. Match terms associated with the orientation of the medical assistant to the correct definitions. Place the correct numbers in the blanks provided.

______a. Professional organization of doctors of medicine formed to improve the quality of medical care and develop ethical standards for the profession

______b. All of the physcial, mental, and emotional characteristics that make up a whole person

______c. Medical assistant who takes and passes an exam developed by the AAMA to become certified in the profession

______d. Feeling or emotion

______e. Professional, national organization of medical assistants that promotes the welfare of patients; purposes are upgrading and improving the quality of health care, and providing educational materials and programs for members to upgrade their profession

______f. Recognizing the worth of self and the worth of other people, their property, and opinions

______g. Individual who performs clinical and administrative procedures under the direct supervision of a doctor; works in physicians' offices, hospitals, and other medical settings which deliver health care to patients

______h. Getting along with people

______i. Journal of medical assistant news and educational articles published by the AAMA to keep professionals up-to-date

1. Attitude
2. Certified Medical Assistant (CMA)
3. Medical Assistant (MA)
4. Personality
5. American Association of Medical Assistants (AAMA)
6. Human relations
7. American Medical Association (AMA)
8. Respect
9. *The Professional Medical Assistant*

2. List the characteristics of the well-groomed medical assistant.

a. ________________________________

b. ________________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

3. Match personal qualities needed by the medical assistant to the correct definitions. Place the correct numbers in the blanks provided.

______a. To be capable of being trusted or relied upon

______b. To have a system of moral principles or standards of behavior

______c. To be sincere and tell the truth

______d. To have a desire or the initiative to act on your own with little supervision

______e. To have an awareness of the feelings and emotions of another person and their meaning and significance

______f. To have skill and poise when dealing with others

______g. To conduct yourself with high standards of behavior

1. Tactful
2. Ethical
3. Self-motivated
4. Empathetic
5. Professional
6. Honest
7. Dependable

4. State six ways to show respect for others.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

5. List administrative functions of the medical assistant.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

6. Select from the following list common clinical or medical functions of the medical assistant. Mark each correct answer with an "X."

______a. Sterilize and care for instruments and equipment

______b. Prepare patients and assist physicians in performing exams, treatments and minor surgery

______c. Diagnose and treat common disorders and diseases

______d. Order and maintain permanent and disposable supplies

______e. Write and call in prescriptions

7. Describe medical assistant training programs.

a. Vocational program--______________________________

____

b. Associate degree program--______________________________

____

c. Proprietary schools and correspondence courses--______________________________

____

8. Distinguish between a "job" and a "career." Place an "X" in the blank before the definition of a career.

______a. For hire for a given service or period

______b. Profession for which one is educated and which is undertaken as a permanent calling

9. Evaluate personal habits.

10. Check personality traits.

11. Complete self-analysis.

12. Research job opportunities.

13. Complete word search.

(NOTE: If activities 9 through 13 have not been finished before the test, ask the instructor when they should be completed.)

ORIENTATION
UNIT I

ANSWERS TO TEST

1. a. 7
   b. 4
   c. 2
   d. 1
   e. 5
   f. 8
   g. 3
   h. 6
   i. 9

2. a. Clean and neat hair
   b. Light, attractive makeup
   c. Clean teeth and fresh breath
   d. Little, or no cologne or perfume
   e. Simple understated jewelry
   f. Clean and well-fitting uniform
   g. Clean and well-fitting shoes and stockings
   h. Short, clean, and smootly filed fingernails with clear or light colored polish

3. a. 7
   b. 2
   c. 6
   d. 3
   e. 4
   f. 1
   g. 5

4. Any six of the following:
   a. Show understanding and appreciation for other people's feelings
   b. Realize that other people's feelings make sense to them
   c. Be aware of other people's feelings as well as to what they are saying

d. Show restraint with obnoxious people

e. Remember birthdays, special occasions, kindnesses shown, and troubled times with visits, cards, or some other token

f. Help people feel at ease, important, and useful

g. Find something you can like in any person with whom you must get along

h. Realize that every human being is a worthy individual

i. Return borrowed items and personal properties promptly to their correct places or owners

j. Remember manners and common courtesies

k. Put youself or a loved one in that other person's place and consider how you would want to be treated

5. a. Send statements, process collections, and keep accounts and other financial records

b. Make appointments and receive patients

c. Maintain medical records, correspondence and reports, and file and fill out legal documents

d. Interview patients for medical histories; communicate in person and by telephone

e. Order and maintain supplies and equipment to be used in the office

f. Act as public relations manager for office

g. Complete insurance forms and instruct patients when they are filling out forms

6. a, b, d

7. Descriptions should include:

a. Nine-month course that prepares students to be employed as medical assistants

b. Two-year or 18-month course at the junior college level that prepares students to be employed as medical assistants; if the program is approved by the AAMA, the student may sit for certification exam

c. Programs that offer basic courses to prepare a medical assistant; length of course depends on type of instruction but is usually 18-24 weeks

8. b

9. Evaluated to the satisfaction of the instructor

10. Evaluated to the satisfaction of the instructor
11. Evaluated to the satisfaction of the instructor
12. Evaluated to the satisfaction of the instructor
13. Evaluated to the satisfaction of the instructor

HOSA
UNIT II

UNIT OBJECTIVE

After completion of this unit, the student should be able to use the information concerning HOSA to become an active member involved in learning leadership skills. The student should also be able to recite the Oklahoma Association of HOSA creed and evaluate the effectiveness of parliamentary procedure. This knowledge will be evidenced through completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with HOSA to their correct definitions.
2. Select from a list benefits of membership in HOSA.
3. Match historical dates to important Oklahoma Association of HOSA events.
4. Match historical dates to important HOSA events.
5. Select from a list the purposes of the HOSA organization.
6. Select from a list other student vocational organizations.
7. Write the HOSA motto.
8. Name the official HOSA colors.
9. Describe the official HOSA dress code for members.
10. Label the colors of the official HOSA emblem.
11. Name the organizational levels of HOSA.
12. Match chapter officers to their duties.
13. Name essentials of a good chapter.
14. Select from a list criteria for selection of voting delegates.
15. Name types of chapter activities.
16. Complete a chart showing leadership training activities for HOSA.

HOSA
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Write to state advisor of HOSA to obtain current chapter information forms.

      (NOTE: Write to: Health Occupations Education Division, 1515 W. 6th Avenue, Stillwater, Oklahoma 74074.)

   B. Provide student with objective sheet.

   C. Provide student with information and assignment sheets.

   D. Make transparency.

   E. Discuss unit and specific objectives.

   F. Discuss information and assignment sheets.

   G. Invite alumni members to speak to class about the benefits and rewards of being involved in HOSA.

   H. Review last year's scrapbook of activities, illustrating how students can get involved, learn, achieve, and be rewarded through involvement.

   I. Develop a local slide program involving students from your school. Show the different activities offered and change it from year to year to involve current students.

   J. Make a bulletin board for the first day of school to show benefits of belonging to HOSA.

   K. Have students visit other student vocational organizations to observe activities.

   L. Have two or three students visit a civic club and let them present information about the HOSA organization.

   M. Use national HOSA creed, when available, for chapter meetings.

   N. Invite other HOSA chapters to installations and meetings.

   O. Invite resource people to speak about their career field or professional involvement in organizations.

   P. Set up a simulated parliamentary procedure for the students to practice technique.

   Q. Encourage attendance at leadership training conferences and sponsor students on trips to meetings.

   R. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency master: TM 1--HOSA Emblem

  D. Assignment sheets

    1. Assignment Sheet #1--Evaluate Chapter Meeting

    2. Assignment Sheet #2--Recite the Oklahoma Association of HOSA Creed

    3. Assignment Sheet #3--Evaluate the Effectiveness of Parliamentary Procedure

  E. Test

  F. Answers to test

III. Unit references:

  A. *Oklahoma Health Occupations Student Organization Handbook*. Stillwater: Oklahoma State Department of Vocational and Technical Education, 1974.

  B. *Official Guide*. Washington, D.C.: Vocational Industrial Clubs of America, Inc., n.d.

  C. *DECA Handbook*. 7th ed. Falls Church, Virginia: Distributive Education Clubs of America, 1972.

  D. *Official FFA Manual*. Alexandria, Virginia: Future Farmers of America, 1977.

IV. Films:

  A. "You Pack Your Own Chute." Ramic Productions, 58 West 58th St., New York, New York 10019.

  B. "Mr. Chairman." Encyclopedia Brittannica, 425 N. Michigan Ave., Chicago, Illinois 60601.

  C. "Agriculture's New Generation." Venard Films, Box 1332, Peoria, Illinois 61601.

  (NOTE: The above films are also available on a free-loan basis to Oklahoma teachers only from the Oklahoma State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 W. Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order the films from the above addresses.)

HOSA
UNIT II

INFORMATION SHEET

I. Terms and definitions

A. HOSA (Health Occupations Students of America)--Student organization at the national level for students enrolled in health occupations programs

(NOTE: The state organization is known as the Oklahoma Association of HOSA.)

B. State HOSA advisor--Person appointed by the state supervisor and approved by executive council to advise and provide leadership for the state organization

C. Local chapter advisor--Person(s) designated by local school administration to advise and provide leadership for the local HOSA chapter

D. Voting delegate--Student chosen to represent local chapter in balloting on questions of business or election of officers at state or national conferences

E. Active member--Student enrolled in an approved health occupations educational program; must be member of the state organization in order to hold offices on the local, state, and national levels

(NOTE: The two divisions of active members are Secondary and Full-Time Adult.)

F. Alumni member--Former active member who has remained in good standing with his/her chapter

G. Honorary life member--Individual who has made contributions to development of HOSA in Oklahoma and whose membership has been approved by the state executive council

(NOTE: Alumni and honorary life members have all rights except serving as voting delegates, holding elective office, or participating in state contests.)

H. Professional member--Person who may be associated with or who has participated in the development of health occupations student organizations in Oklahoma as approved by the state organization

I. Parliamentary procedure--Set of rules for conducting a meeting in an organized and efficient manner

(NOTE: Knowledge of these techniques is essential to leadership development and vital to success of any organization. The official handbook for parliamentary procedure is the newly revised *Robert's Rules of Order*.)

INFORMATION SHEET

J. Motion--Proposal that something be done; method of bringing a question before the assembly for consideration

K. Main motion--Introduces business or brings a question directly before the assembly

(NOTE: A main motion is introduced by saying, "I move that. . . ." Only one main motion can be considered at a time.)

L. Subsidiary motion--Motion that modifies or disposes of main motion; must be voted upon before vote is taken on main action

Example: Amendment

M. Privileged motion--Motion that has no connection with main motion and outranks other motions

Example: Fixing time of next meeting, adjourning, calling for question of privilege, calling for order of the day

N. Incidental motion--Motion that arises or relates to procedure and may not refer directly to the main question

Examples: Nominations and elections, objection to consideration, points of order

O. Opening ceremony--Set formal routine that is used at the beginning of each meeting

P. Closing ceremony--Set formal routine that is used at the end of each meeting

II. Benefits of membership in HOSA

A. Provides guidance to student who seeks to develop knowledge, skills, and behavioral characteristics necessary in preparing for a future in a health career

B. Helps student gain self-confidence through development of leadership skills and abilities

C. Helps student associate and exchange information with other students who have the same interests

D. Introduces student to a wide variety of health career choices

E. Helps student develop responsibility through service to the local community

F. Provides student with the opportunity to make realistic career choices

INFORMATION SHEET

III. Historical dates of important Oklahoma Association of HOSA events

   A. August, 1973--Survey of interested health occupations instructors was taken to decide if a new organization should be formed for students in health occupations programs

   B. May 30-31, 1974--Steering committee composed of teachers and state staff members was appointed and met for two days to investigate and make recommendations for the new organization; plans were made for the first chapter to be formed in September

   C. Fall, 1974--Meeting was held to elect state officers for the new health occupations student organization; officers were later installed and the name, colors, motto, creed, and emblem were selected

   D. April, 1975--First state conference was held in Tulsa, Oklahoma for leadership training and skills contests

   E. Spring, 1976--Conference was held in Tulsa, Oklahoma to include new adult chapters from practical nursing programs

   F. Fall, 1976--Conference was held in Oklahoma City, Oklahoma where adult and secondary officers were elected and installed

IV. Historical dates of important HOSA events

   A. November, 1975--Oklahoma was one of the six original charter states involved in the organization of a national health occupations education student organization in Cherry Hill, New Jersey

   B. November, 1976--American Health Occupations Education Student Organization Constitutional Convention was held in Arlington, Texas; national bylaws were adopted and national officers were elected and installed; colors and the name, Health Occupations Students of America, were adopted

   C. April, 1978--First annual conference of HOSA was held in Oklahoma City, Oklahoma to select national uniform, motto, and emblem; to provide leadership training; and to involve students in skills contests

V. Purposes of the HOSA organization

   A. To develop programs and activities which will develop physical, mental, and social well-being of the individual and produce qualities of leadership, character, good citizenship, ethical practices, and respect for the dignity of work

   B. To develop self-actualization of each member which will contribute to meeting the individual's psychological, social, and economic needs

INFORMATION SHEET

C. To build the students' confidence in themselves and their work by teaching them to assume responsibilities and develop occupational competencies and social skills that lead to realistic choices of careers and successful employment in the field of health

D. To promote interorganizational relationships with professional groups, businesses, industries, and other student organizations

E. To recognize individual achievement in scholarship, occupational skills, or services rendered by providing awards

F. To promote involvement in current health care issues, environmental concerns, and survival needs of the community, the nation, and the world

G. To promote the establishment of local HOSA chapters

H. To prepare students for participation in their professional organizations

VI. Other student vocational organizations

A. DECA (Distributive Education Clubs of America)

B. FHA-HERO (Future Homemakers of America-Home Economics Related Occupations)

C. FFA (Future Farmers of America)

D. VICA (Vocational Industrial Clubs of America)

E. FBLA (Future Business Leaders of America)

F. AIASA (American Industrial Arts Student Association)

VII. HOSA motto--The Hands of HOSA Mold the Health of Tomorrow

VIII. Official HOSA colors

A. Hospital white

B. Navy blue

C. Maroon accent

IX. Official HOSA dress code for members

A. Female

1. Navy blue blazer

2. White or navy blue pants or skirt

INFORMATION SHEET

        3. Maroon scarf with white HOSA imprint

        4. Plain, tailored, white shirt with winged collar

    B. Male

        1. Navy blue blazer

        2. White or navy blue pants

        3. Maroon tie with white HOSA imprint

        4. Plain, tailored, white shirt

X. Colors of the official HOSA emblem (Transparency 1)

    A. Background, Health Occupations Students of America, HOSA, hands, and figure--White

    B. Triangle and Founded 1976--Blue

    C. Outer band--Maroon

XI. Organizational levels of HOSA

    A. Local chapters

    (NOTE: Finances needed to operate the local chapters will depend upon the program planned for the year.)

    B. State Oklahoma Association of HOSA

    (NOTE: State organization finances are provided through dues from members.)

    C. National HOSA

    (NOTE: National organization finances are provided through yearly dues.)

XII. Chapter officers and their duties

    A. President--Presides over all chapter meetings; serves as ex officio member on all committee meetings; coordinates and supervises all the efforts of chapter officers and committees

    B. Vice-president--Assists the president; presides over chapter activities in the absence of the president; serves as chairperson of program committee

INFORMATION SHEET

C. Secretary--Prepares and reads minutes of all chapter meetings; maintains membership list and record of attendance; answers all chapter correspondence promptly; counts and records all votes; reads all communications at meetings; prepares an agenda for meetings

D. Treasurer--Keeps financial records of the chapter

E. Sentinel--Sets up and secures meeting rooms; attends the door during meetings and greets visitors; makes sure meeting room is comfortable; secures the meeting without interruption

F. Parliamentarian--Informs all members on correct parliamentary procedures

G. Reporter--Prepares news releases regarding HOSA activities for all media

H. Historian--Gathers and assembles all materials in preparation for the chapter scrapbook

I. Chaplain--Takes charge of all religious activities during chapter meetings and banquets

XIII. Essentials of a good chapter

A. Capable officers and leaders

B. Responsibility for chapter activities shared by all members

C. Challenging program of activities

D. Proper recordkeeping

E. Well-planned, regularly held chapter meetings

F. Support from school officials and community leaders

G. Active member participation in chapter activities

XIV. Criteria for selection of voting delegates

A. Active participation in all chapter meetings and assigned committees

(NOTE: This person should demonstrate leadership abilities.)

B. Successful achievement in classroom assignments and laboratory activities while maintaining achievement in other school subjects

(NOTE: Each chapter is entitled to be represented by two voting delegates.)

INFORMATION SHEET

XV. Types of chapter activities

(NOTE: Activities promote growth of individual members; improve school, home, and community; and serve as showcases for the local chapter, the national organization, and vocational education.)

A. Professional activities

Examples: Guest speakers, vocation-related films, chapter field trips, special recognition banquets, state and national conferences, competitive events

B. Civic activities

Examples: Benefits for March of Dimes, Heart Fund, Community Chest, Red Cross, or other service agencies; booths and exhibits at state fairs; assisting community officials with health projects

C. Service activities

Examples: Thanksgiving or Christmas food baskets for people in need, involvement with senior citizen groups

D. Social activities

Examples: Get-togethers for prospective members, reception for faculty members, chapter picnics or dances

E. Fund-raising activities

Examples: Sales projects, car washes, bake sales, dinners

(NOTE: Local chapters can finance their group through fund-raising events but these must be approved by school administration.)

XVI. Leadership training activities for HOSA

Meetings	Activities and Participants
Vocational Leadership Institute (STATE) (NOTE: Since HOSA does not elect its state officers until fall, each chapter advisor is asked to submit the names of potential leaders in HOSA, students who will be members of a HOSA chapter the next year and would be willing to run for office.)	Each summer state officers of the vocational student organizations attend a meeting that provides leadership training (NOTE: This meeting includes members from FFA, FHA, DECA, VICA, FBLA, AIASA, and HOSA.)

INFORMATION SHEET

Meetings	Activities and Participants
Fall HOSA Leadership Conference (STATE)	All members of Oklahoma Association of HOSA can participate; local chapter officers are provided with leadership training; elections of secondary and full-time officers are held
Spring HOSA Leadership Conference (STATE)	All members of Oklahoma Association of HOSA can participate; all members are provided with leadership training; provides competitive events and leadership-scholarship skills
National HOSA Convention	Each spring all members of HOSA can participate in competitive events and leadership-scholarship skills; election of national officers is held

XVII. Principles upon which parliamentary procedure is based (Assignment Sheet #3)

A. Justice and courtesy for all

B. Majority rule

C. Right of the minority to be heard

D. Protection of the rights of the individual

E. Consideration of one thing at a time

F. Maintenance of order

G. Expedition of business

XVIII. Sequence of business carried out during a HOSA meeting (Assignment Sheets #1 and #2)

A. Opening ceremony

B. Reading and approval of minutes of previous meeting

C. Committee reports

D. Unfinished business

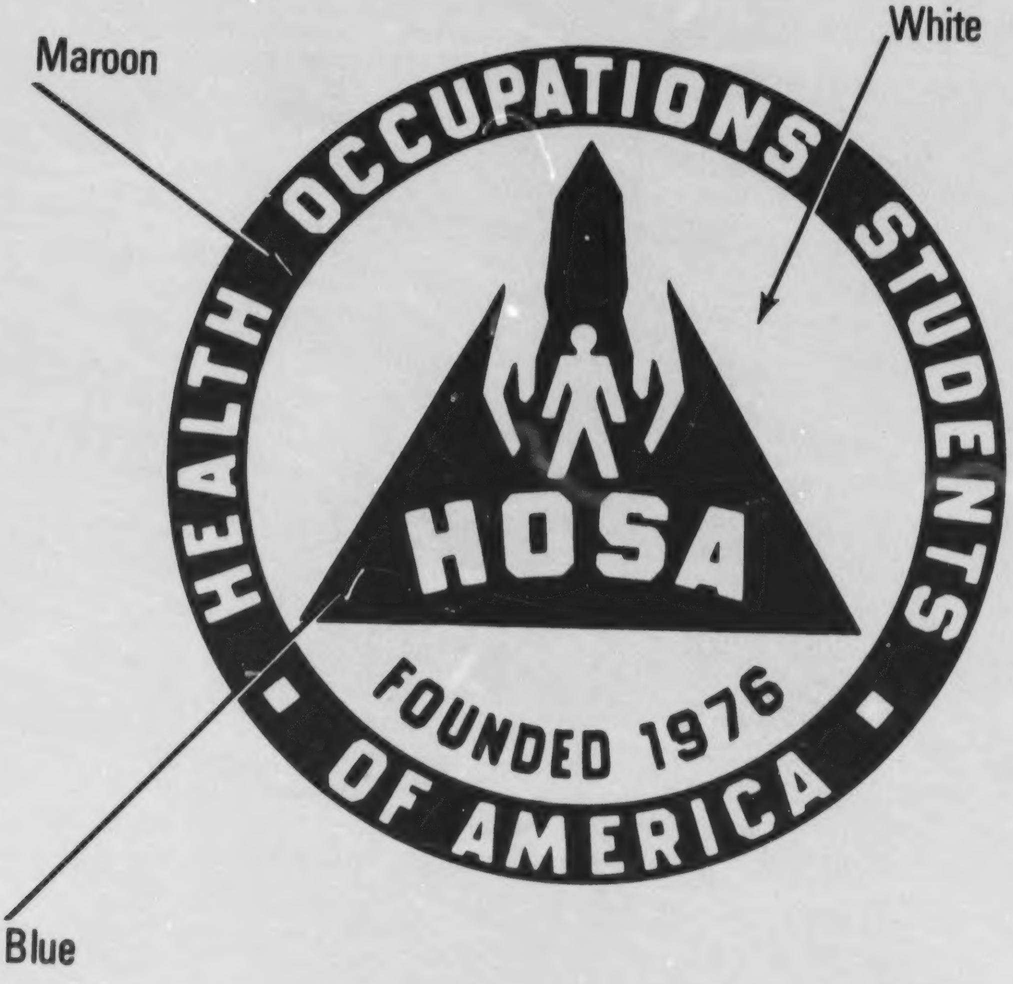
INFORMATION SHEET

- E. New business
- F. Program
- G. Closing ceremony
- H. Entertainment and/or recreation

XIX. Characteristics of a good chairperson

- A. Willingness to work
- B. Self-confidence
- C. Well-developed voice
- D. Neat appearance
- E. Ability to make fair and impartial judgments

HOSA Emblem


Maroon
White
HEALTH OCCUPATIONS STUDENTS
HOSA
FOUNDED 1976
OF AMERICA
Blue

HOSA
UNIT II

ASSIGNMENT SHEET #1--EVALUATE CHAPTER MEETING

NAME______________________________ SCORE__________________

Take notes at the next chapter meeting and record your findings below.

1. Did meeting follow the sequence of business as given in information sheet?

   ____

2. What topics were discussed? ______________________________

   ____

   ____

   ____

   ____

3. Was parliamentary procedure followed correctly? If not, why? ______________

   ____

   ____

   ____

4. How many people were involved in the discussion? ______________

5. Where was meeting held and how many people attended? ______________

   ____

6. What decisions were made during the meeting? ______________

   ____

   ____

   ____

   ____

7. Was a guest speaker involved and what was his/her topic? ______________

   ____

   ____

HOSA
UNIT II

ASSIGNMENT SHEET #2--RECITE THE OKLAHOMA ASSOCIATION OF HOSA CREED

NAME______________________________ SCORE ____________________

Read each paragraph carefully and try to memorize it. Then move on to the next paragraph until each one is memorized. Practice by saying the creed with a classmate and be able to recite it to the satisfaction of the instructor.

We are the HOSA's of Oklahoma. We face the future with understanding, feeling, and a dedication to improve health.

We strive to improve personal and community health by helping others to help themselves. We are concerned with the physical, social, and mental well-being of each individual.

Health is our first goal in having a clear conscience toward all communicable and noncommunicable disorders, disabilities, and other malfunctions.

Our main concern is to promote health services to each and every individual, for we strive to maintain a healthy and happy society.

For we are the HOSA's of Oklahoma. We face the future with understanding, feeling, and a dedication to improve health.

(NOTE: National HOSA will select a creed at a future date.)

HOSA
UNIT II

ASSIGNMENT SHEET #3--EVALUATE THE EFFECTIVENESS OF PARLIAMENTARY PROCEDURE

NAME________________________ SCORE______________

Using a topic given to you by the instructor, hold a meeting and use parliamentary procedure correctly. This activity may be used to practice for the competition for the HOSA skills contest. After the meeting is closed, evaluate the effectiveness of parliamentary procedure by answering the following questions.

1. Outline the order of business for the meeting.

____

____

____

____

____

____

2. Did the order of business follow the proper sequence? ______________

3. How many people participated in the meeting? ______________

4. How many motions were made? ______________

5. Name the motions made.

____

____

____

____

6. Were any amendments made? ______________

7. Name the amendments made.

____

____

____

____

ASSIGNMENT SHEET #3

8. What were the strong points of your meeting?

____

____

____

____

____

9. What weak points did you notice?

____

____

____

____

10. How can you improve your meetings?

____

____

____

____

HOSA
UNIT II

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with HOSA to the correct definitions. Place the correct numbers in the blanks provided. (Answers to "a" through "i" are on this page).

_____a. Motion that modifies or disposes of main motion; must be voted upon before vote is taken on main action

_____b. Set formal routine that is used at the beginning of each meeting

_____c. Student enrolled in an approved health occupations educational program; must be member of state organization in order to hold offices on the local, state, and national levels

_____d. Person appointed by the state supervisor and approved executive council to advise and provide leadership for the state organization

_____e. Motion that arises or relates to procedure and may not refer directly to the main question

_____f. Person(s) designated by local school administration to advise and provide leadership for the local HOSA chapter

_____g. Proposal that something be done; method of bringing a question before the assembly for consideration

_____h. Student organization at the national level for students enrolled in health occupations programs

_____i. Person who may be associated with or who has participated in the development of health occupations student organizations in Oklahoma as approved by the state organization

1. HOSA (Health Occupations Students of America)
2. State HOSA advisor
3. Local chapter advisor
4. Active member
5. Professional member
6. Motion
7. Subsidiary motion
8. Incidental motion
9. Opening ceremony

______j. Set formal routine that is used at the end of each meeting

______k. Motion that has no connection with main motion and outranks other motions

______l. Student chosen to represent the local chapter in balloting on questions of business or election of officers at state or national conferences

______m. Former active member who has remained in good standing with his/her chapter

______n. Individual who has made contributions to development of HOSA in Oklahoma and whose membership has been approved by the state executive council

______o. Introduces business or brings a question directly before the assembly

______p. Set of rules for conducting a meeting in an organized and efficient manner

10. Voting delegate
11. Main motion
12. Closing ceremony
13. Honorary life member
14. Parliamentary procedure
15. Alumni member
16. Privileged motion

2. Select from the list below benefits of membership in HOSA. Mark each correct answer with an "X."

______a. Provides student with the opportunity to make realistic career choices

______b. Provides opportunity for student to be excused from other classes

______c. Helps student associate and exchange information with other students who have the same interests

______d. Helps student gain self-confidence through development of leadership skills and abilities

______e. Helps student develop responsibility through service to the local community

______f. Allows officers to have special privileges

______g. Provides guidance to student who seeks to develop knowledge, skills, and behavioral characteristics necessary in preparing for a future in a health career

______h. Assures student a better grade

______i. Introduces student to a wide variety of health career choices

3. Match historical dates to important Oklahoma Association of HOSA events. Place the correct numbers in the blanks provided.

_____a. Conference was held in Tulsa, Oklahoma to include new adult chapters from the practical nursing programs

_____b. Steering committee composed of teachers and state staff members was appointed and met for two days to investigate and make recommendations for the new organization; plans were made for the first chapter to be formed in September

_____c. First state conference was held in Tulsa, Oklahoma for leadership training and skills contests

_____d. Conference was held in Oklahoma City, Oklahoma where adult and secondary officers were elected and installed

_____e. Survey of interested health occupations instructors was taken to decide if a new organization should be formed for students in health occupations programs

_____f. Meeting was held to elect state officers for the new health occupations student organization; officers were later installed and the name, colors, motto, creed, and emblem were selected

1. August, 1973
2. May 30-31, 1974
3. Fall, 1974
4. April, 1975
5. Spring, 1976
6. Fall, 1976

4. Match historical dates to important HOSA events. Place the correct numbers in the blanks provided.

_____a. American Health Occupations Education Student Organization Constitutional Convention was held in Arlington, Texas; national bylaws were adopted and national officers were elected and installed; colors and the name, Health Occupations Students of America, were adopted

_____b. First annual conference of HOSA was held in Oklahoma City, Oklahoma to select national uniform, motto, and emblem; to provide leadership training; and to involve students in skills contests

_____c. Oklahoma was one of six original charter states involved in the organization of a national health occupations education student organization in Cherry Hill, New Jersey

1. November, 1975
2. November, 1976
3. April, 1978

5. Select from the list below the purposes of the HOSA organization. Mark each correct answer with an "X."

______a. To prepare students for participation in their professional organizations

______b. To promote the establishment of local HOSA chapters

______c. To provide opportunity to compete with other student vocational organizations

______d. To promote involvement in current health care issues, environmental concerns, and survival needs of the community, the nation, and the world

______e. To recognize individual achievement in scholarship, occupational skills, or services rendered by providing awards

______f. To promote interorganizational relationships with professional groups, businesses, industries, and other student organizations

______g. To give students a break from class routine

______h. To build the students' confidence in themselves and their work by teaching them to assume responsibilities and develop occupational competencies and social skills that lead to realistic choices of careers and successful employment in the field of health

______i. To develop self-actualization of each member which will contribute to meeting the individual's psychological, social, and economic needs

______j. To develop programs and activities which will develop physical, mental, and social well-being of the individual and produce qualities of leadership, character, good citizenship, ethical practices, and respect for the dignity of work

6. Select from the list below other student vocational organizations. Mark each correct answer with an "X."

______a. DECA (Distributive Education Clubs of America)

______b. FFA (Future Farmers of America)

______c. OBEA (Oklahoma Business Education Association)

______d. FHA-HERO (Future Homemakers of America-Home Economics Related Occupations)

______e. ONA (Oklahoma Nursing Association)

______f. VICA (Vocational Industrial Clubs of America)

______g. FBLA (Future Business Leaders of America)

______h. OHEA (Oklahoma Home Economics Association)

______i. AIASA (American Industrial Arts Student Association)

7. Write the HOSA motto.

____

____

8. Name the official HOSA colors.

a. ______________________________

b. ______________________________

c. ______________________________

9. Describe the official HOSA dress code for members.

____

____

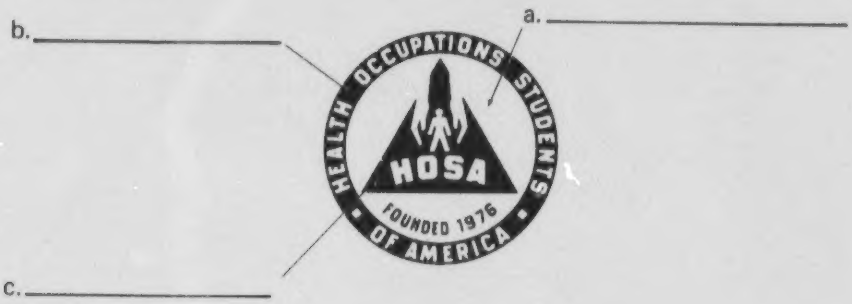
____

____

____

____

10. Label the colors of the official HOSA emblem below. Write the correct colors in the blanks provided.


a. ____________
b. ____________
c. ____________
HEALTH OCCUPATIONS STUDENTS OF AMERICA
HOSA
FOUNDED 1976

11. Name the organizational levels of HOSA.

a. ______________________________

b. ______________________________

c. ______________________________

12. Match the chapter officers to their duties. Place the correct numbers in the blanks provided.

_____a. Prepares and reads minutes of all chapter meetings; maintains membership list and record of attendance; answers all chapter correspondence promptly; counts and records all votes; reads all communications at meetings; prepares an agenda for meetings

_____b. Informs all members on correct parliamentary procedures

_____c. Presides over all chapter meetings; serves as ex officio member on all committee meetings; coordinates and supervises all the efforts of chapter officers and committees

_____d. Gathers and assembles all materials in preparation for the chapter scrapbook

_____e. Takes charge of all religious activities during chapter meetings and banquets

_____f. Prepares news releases regarding HOSA activities for all media

_____g. Assists the president; presides over chapter activities in the absence of president; serves as chairperson of program committee

_____h. Keeps financial records of the chapter

_____i. Sets up and secures meeting rooms; attends the door during meetings and greets visitors; makes sure meeting room is comfortable; secures the meeting without interruption

1. President
2. Vice-president
3. Secretary
4. Treasurer
5. Sentinel
6. Parliamentarian
7. Reporter
8. Historian
9. Chaplain

13. Name four essentials of a good chapter.

a. ____

b. ____

c. ____

d. ____

14. Select from the list below criteria for selection of voting delegates. Mark each correct answer with an "X."

    ______a. High academic standing

    ______b. Successful achievement in classroom assignments and laboratory activities while maintaining achievement in other school subjects

    ______c. Active participation in all chapter meetings and assigned committees

    ______d. Popular vote

15. Name types of chapter activities.

    a. ______________________________

    b. ______________________________

    c. ______________________________

    d. ______________________________

    e. ______________________________

16. Complete the chart below showing leadership training activities for HOSA.

Meetings	**Activities and Participants**
Spring HOSA Leadership Conference (STATE)	a. ______________________ ______________________ ______________________ ______________________
b. ______________________ ______________________	Each spring all members of HOSA can participate in competitive events and leadership-scholarship skills; election of national officers is held
Fall HOSA Leadership Conference (STATE)	c. ______________________ ______________________ ______________________ ______________________ ______________________ ______________________
d. ______________________ ______________________	Each summer state officers of the vocational student organizations attend a meeting that provides leadership training

17. Select from the list below principles upon which parliamentary procedure is based. Mark each correct answer with an "X."

______a. Majority rule

______b. Maintenance of order

______c. Suppression of minority

______d. Consideration of one thing at a time

______e. Power to control by manipulation

______f. Unlimited decision-making by the chairperson

______g. Right of the minority to be heard

______h. Justice and courtesy for all

______i. Unlimited power of state advisor

______j. Protection of the rights of the individual

______k. Expedition of business

18. Arrange in order the sequence of business carried out during a HOSA meeting. Place a "1" for the first activity, a "2" for the second activity, and so on in the correct blanks.

______a. Committee reports

______b. New business

______c. Closing ceremony

______d. Opening ceremony

______e. Unfinished business

______f. Reading and approval of minutes of previous meeting

______g. Program

______h. Entertainment and/or recreation

19. Name characteristics of a good chairperson.

a. ____

b. ____

c. ____

d. ______________________________

e. ______________________________

20. Evaluate chapter meeting.

21. Recite the Oklahoma Association of HOSA creed.

22. Evaluate the effectiveness of parliamentary procedure.

(NOTE: If activities 20 through 22 have not been finished before the test, ask the instructor when they should be completed.)

HOSA
UNIT II

ANSWERS TO TEST

1. a. 7
   b. 9
   c. 4
   d. 2
   e. 8
   f. 3
   g. 6
   h. 1
   i. 5
   j. 12
   k. 16
   l. 10
   m. 15
   n. 13
   o. 11
   p. 14
2. a, c, d, e, g, i
3. a. 5
   b. 2
   c. 4
   d. 6
   e. 1
   f. 3

4. a. 2
   b. 3
   c. 1
5. a, b, d, e, f, h, i, j
6. a, b, d, f, g, i
7. The Hands of HOSA Mold the Health of Tomorrow
8. a. Hospital white
   b. Navy blue
   c. Maroon accent
9. Description should include:
   a. Female
      1) Navy blue blazer
      2) White or navy blue pants or skirt
      3) Maroon scarf with white HOSA imprint
      4) Plain, tailored, white shirt with winged collar
   b. Male
      1) Navy blue blazer
      2) White or navy blue pants
      3) Maroon tie with white HOSA imprint
      4) Plain, tailored, white shirt
10. a. White
    b. Maroon
    c. Blue
11. a. Local chapters
    b. State Oklahoma Association of HOSA
    c. National HOSA

12. a. 3
    b. 6
    c. 1
    d. 8
    e. 9
    f. 7
    g. 2
    h. 4
    i. 5

13. Any four of the following:
    a. Capable officers and leaders
    b. Responsibility for chapter activities shared by all members
    c. Challenging program of activities
    d. Proper recordkeeping
    e. Well-planned, regularly held chapter meetings
    f. Support from school officials and community leaders
    g. Active member participation in chapter activities

14. b, c

15. a. Professional activities
    b. Civic activities
    c. Service activities
    d. Social activities
    e. Fund-raising activities

16. a. All members of Oklahoma Association of HOSA can participate; all members are provided with leadership training; provides competitive events and leadership-scholarship skills
    b. National HOSA Convention
    c. All members of Oklahoma Association of HOSA can participate; local chapter officers are provided with leadership training; elections of secondary and full-time officers are held
    d. Vocational Leadership Institute (STATE)

17. a, b, d, g, h, j, k

18. a. 3
    b. 5
    c. 7
    d. 1
    e. 4
    f. 2
    g. 6
    h. 8

19. a. Willingness to work
    b. Self-confidence
    c. Well-developed voice
    d. Neat appearance
    e. Ability to make fair and impartial judgments

20. Evaluated to the satisfaction of the instructor

21. Evaluated to the satisfaction of the instructor

22. Evaluated to the satisfaction of the instructor

CAREER SUCCESS
UNIT III

UNIT OBJECTIVE

After completion of this unit, the student should be able to find and keep a job and increase self-satisfaction in a career. The student should also be able to prepare a resumé, use the telephone to arrange a job interview, and evaluate personal habits associated with career success. This knowledge will be evidenced through completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with career success to the correct definitions.
2. Arrange in order steps to take in finding and securing a job.
3. Name sources for locating employment opportunities.
4. Distinguish between types of employment agencies.
5. Select from a list guidelines for dressing for an interview.
6. Discuss ways to increase self-satisfaction in a career.
7. Select from a list reasons people lose jobs.
8. List ways to continue education in chosen field.
9. Prepare a resumé.
10. Write a cover/application letter.
11. Complete employment application form.
12. Use telephone to arrange a job interview.
13. Participate in a job interview.
14. Evaluate a job offer.
15. Write a follow-up letter.
16. Compare job opportunities.
17. Ask for a raise.

CAREER SUCCESS
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

  A. Provide student with objective sheet.

  B. Provide student with information and assignment sheets.

  C. Discuss unit and specific objectives.

  D. Discuss information and assignment sheets.

  E. Provide the necessary information and equipment to complete assignment sheets.

  F. Invite resource persons from employment agencies, health care services, and personnel departments to speak to group about interviews, job placement, and career and opportunity counseling.

  G. Use "Critical Steps of Job Interviewing" film and sound cassettes to assist student in learning interviewing competencies.

  H. Involve the VIEW (Vital Information for Education and Work) program to inform students concerning opportunities for medical office assistants.

  (NOTE: For information, contact Les Miller, Director of Oklahoma VIEW Program, State Department of Vocational and Technical Education, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074, [405] 377-2000, or Joe Fogelstrom, VIEW Coordinator, State Department of Education, Hodge Education Building, Oklahoma City, Oklahoma 73105, [405] 521-2426.)

  I. Use roleplaying in Assignment Sheet #5 to practice for HOSA skill contest in "Job Application and Interview."

  J. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Assignment sheets

    1. Assignment Sheet #1--Prepare a Resumé

    2. Assignment Sheet #2--Write a Cover/Application Letter

    3. Assignment Sheet #3--Complete Employment Application Form

    4. Assignment Sheet #4--Use Telephone to Arrange a Job Interview

5. Assignment Sheet #5--Participate in a Job Interview
6. Assignment Sheet #6--Evaluate a Job Offer
7. Assignment Sheet #7--Write a Follow-Up Letter
8. Assignment Sheet #8--Compare Job Opportunities
9. Assignment Sheet #9--Ask for a Raise
10. Assignment Sheet #10--Write a Letter of Resignation
11. Assignment Sheet #11--Evaluate Personal Habits Associated with Career Success
12. Assignment Sheet #12--Improve Listening Skills

D. Test

E. Answers to test

III. Unit references:

A. Egglund, Steven A., and Williams, John W. *Human Relations in Business.* Dallas: South-Western Publishing Co., 1977.

B. Sawatzky, Joyce et al. *Home Economics I: Basic Core.* rev. ed. Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1977.

C. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1977.

IV. Additional references:

A. Helsel, Bob, and Threadgill, Peggy. *Critical Steps of Job Interviewing.* Stillwater, Oklahoma, State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center and Adult Center for Vocational and Technical Education, 1978.

(NOTE: This program is designed to assist students in developing basic interviewing competencies. It is a 3 1/2 to 4-hour program including programmed reading exercises, listen-respond exercises, and structured role plays. The administrator's kit includes instructor's manual, 16 mm film, and five cassettes. Available for purchase from the State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074.)

B. "How to Get and Hold the Right Job."

C. "How to Prepare Yourself for Job Interviews."

D. "How to 'Sell Yourself' to an Employer."

(NOTE: The above pamphlets are available from the nearest state employment service office.)

E. "Making the Most of Your Job Interview." Available from New York Life Insurance Company, 51 Madison Avenue, New York, New York 10010.

F. "Appointment with Tomorrow." Available from Vaseco, Inc., 2301 Classen Blvd., Oklahoma City, Oklahoma 73106.

(NOTE: The following films are available on a free-loan basis to Oklahoma teachers only from the State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order materials from the addresses listed.)

G. "Your Job: Fitting In." Color, 15 minutes, Coronet Films, 1976. Available from Coronet Films, Coronet Building, 63 East South Water Street, Chicago, Illinois 60601.

H. "Get That Job: Line Up Your Interview." Color, 11 minutes, Coronet Films, 1976. Available from Coronet Films, Coronet Building, 63 East South Water Street, Chicago, Illinois 60601.

I. "Applying for a Job." Color 13 1/2 minutes, Encyclopedia Britannica, 1971. Available from Encylopedia Britannica Educational Corporation, 425 North Michigan Avenue, Chicago, Illinois 60611.

J. "Getting a Job is a Job." Color, 20 minutes, Dibie-Dash, 1968. Available from Dibie-Dash Productions, 4949 Hollywood Boulevard, Suite 217, Hollywood, California 90028.

K. "Your Job: Finding the Right One." Color, 13 1/2 minutes, Coronet Films, 1970. Available from Coronet Films, Coronet Building, 63 East South Water Street, Chicago, Illinois 60601.

L. "Your Job: Applying for It." Color, 13 1/2 minutes, Coronet Films, 1970. Available from Coronet Films, Coronet Building, 63 East South Water Street, Chicago, Illinois 60601.

M. "Job Interview: I Guess I Got the Job." Color, 13 minutes, McGraw-Hill Films, 1975. Available from McGraw-Hill Films, 1221 Avenue of the Americas, New York, New York 10020.

CAREER SUCCESS
UNIT III

INFORMATION SHEET

I. Terms and definitions

A. Attitude--Feelings about people, things, and ideas

(NOTE: An attitude can make or break your job. Your role in the health field will put you in contact with many different people in many situations and will involve deciding how you feel and how you will react.)

B. Blind ad--Classified advertisement that does not identify the advertiser

(NOTE: Applicant is asked to send a letter of application and resumé to a post office box number or to call a certain number.)

Example:

Medical Assistant
8:00 a.m. - 5:00 p.m.
No Weekends or Holidays
P. O. Box 667
Sometown, Somestate

C. Communication--Sharing of a message or an idea which results in clear understanding between the sender and the receiver of the message

D. Employment agency--Business designed to help individuals find jobs

(NOTE: These agencies are excellent resources for medical assistants, medical secretaries, or receptionists in medical offices.)

E. Employment application form--Printed form on which job applicant records information about personal history, job history, job experience, education, and references

F. Employment/situation wanted ad--Classified advertisement placed by individual seeking employment and indicating job seeker's qualifications

Example:

Experienced Medical
Assistant seeking work in
private or clinical practice.
6 years exper. and CMA-C.
Call 547-9870 after 3:00 p.m.

G. Ethics--Code or standard of behavior; professional conduct

H. Habit--Acquired action that has become automatic; tendency to perform a certain action

INFORMATION SHEET

I. Help wanted ad--Advertisement telling what kind of job is available and what qualifications are required

Example:

> Medical Assistant
> wanted to work in OB-Gyn
> office. Must have exper.
> in clerical and medical
> practices. Contact the
> OB-Gyn Clinic 428-5151

J. Human relations--Continuous process of getting along with people

K. Interview--Meeting of prospective employer and job applicant for evaluation and questioning

L. Job enrichment program--Activity designed for technical development and worker improvement; may be in the form of a seminar, workshop, or short conference

(NOTE: Many institutions and organizations hold workshops, seminars, or short courses to bring the health worker up-to-date on new equipment and new techniques. Many employers are willing to provide the time and sometimes the finances for an employee to attend these programs.)

M. Learning attitude--On-going alertness for any new knowledge or training

N. Liability insurance--Policy that covers health worker in case of accident or injury to person receiving care

Example: Patient slips and falls in treatment room and charges medical assistant with negligence in care; the insurance will cover the charges, if negligence is proven

(NOTE: Many facilities and professional people carry liability insurance to cover their employees. Many of the professional organizations and insurance companies have special policies that health workers may purchase. It is advisable that workers have some type of liability insurance to cover them as they work with the patients.)

O. Resumé--Written summary of information about an individual that would be of interest to a prospective employer; may also be referred to as a personal data sheet

P. Technical knowledge--Information about a job and the skills needed to perform the job

Example: A medical assistant must be able to make appointments, keep basic set of books, and assist physician in basic health-related skills

Q. Vita--Brief, autobiographical sketch

INFORMATION SHEET

II. Steps to take in finding and securing a job

(NOTE: You may not get the job the first time and that first interview may not be what you expected. Do not be discouraged; look at the experience as a learning situation. Evaluate yourself and work to improve the weak points and polish the good ones.)

A. Write down a complete self-inventory

(NOTE: Consider your abilities, experience, training, personality, desired working conditions, and what you want from life. Also consider your limitations and your need for more training and/or education. You might have to take lesser jobs first to get more experience to qualify for the job level you desire. **BE HONEST WITH YOURSELF**.)

B. Make a list of employer possibilities

C. Make a list of possible contacts to help you in your job search

D. Prepare for a job interview (Assignment Sheets #1, #2, #3, #4, and #5)

(NOTE: Decide on the method of seeking the job interview. Would a telephone call or a letter be better? Will you need a resumé? Decide on a follow-up method if the interview is not decisive.)

E. Estimate salary

(NOTE: Look at the newspaper to get an idea of the pay range for the job. Age and experience are factors in determining starting pay. If the letters DOE appear in the ad, the salary depends on the applicant's experience. Imagine yourself hiring you. What do you have to sell and of what value is it to a prospective employer?)

III. Sources for locating employment opportunities

A. Other people

(NOTE: Tell people that you are job hunting. The more people who are aware that you are interested in obtaining a job, the better your chances for locating employment.)

Examples: Teachers, counselors, ministers or priests, friends, relatives, neighbors, political officials, business people, professionals in the medical field

B. Newspapers

(NOTE: Use situation wanted columns, help wanted ads, general listings by employment agencies, and blind ads.)

C. Employment agencies

INFORMATION SHEET

D. Former employers

E. Personnel offices of health facilities

F. School placement services

G. Professional journals and newsletters

IV. Types of employment services

A. Private agencies

1. Charge placement fee for service

(NOTE: For fee-paid jobs, the employer pays the placement fee.)

2. Collect fee when employment is secured

3. Request signed contract between you and agency

4. Are controlled by state laws

B. Public agencies

1. Do not charge placement fee for services

2. Are supported by state or federal government funds

3. Are controlled by state laws

4. Give helpful aptitude tests and counseling if needed

V. Guidelines for dressing for an interview

A. Consider type of job

(NOTE: You should not usually wear a uniform when seeking employment, but do dress neatly and appropriately.)

B. Dress to fit salary range

(NOTE: Dress to fit the salary range for which you are applying.)

C. Consider age of the interviewer

(NOTE: Older people generally prefer more conservative dress.)

D. Coordinate clothing

(NOTE: Consider colors, patterns, and fabrics suitable for the shape of your face and body structure.)

INFORMATION SHEET

E. Be conservative and modest

(NOTE: In most cases, avoid high-fashion items and faddish styles.)

Examples: Traditional shoes vs. high-heeled shoes, simple jewelry, natural-looking makeup, no strong colognes or aftershaves, no sunglasses worn during the interview, no see-through clothing or very short skirts

F. Be well-groomed

(NOTE: Health workers should look very clean and neat. Hair needs to be simple, clean, and pulled back away from face. Nails should be clean and moderately short. If dress code is not mentioned during interview, ask what type of uniform is required and what the rules are for cologne and jewelry.)

VI. Ways to increase self-satisfaction in a career

A. Have a positive attitude

B. Be enthusiastic

C. Keep an open mind

(NOTE: Try to learn something new each day. In the health field, new equipment and new techniques are being tried each day and you can be the most up-to-date worker if you will be receptive.)

D. Read all of the journals, newsletters, and textbooks available that pertain to your profession

E. Join and be active in your professional organizations

F. Volunteer to attend any workshops or in-service programs that your institution might offer

(NOTE: The more you know about your job and your profession, the happier you will be. If you want to further your education and training, set realistic goals and work to attain them.)

VII. Reasons people lose jobs

A. Lack of technical knowledge

(NOTE: Lack of or low ability to execute skills required in a particular job can account for loss of employment. Look at all available opportunities to learn the needed skills or to brush up on learned skills in which you feel weak.)

INFORMATON SHEET

B. Poor human relations and attitude

(NOTE: The biggest factor of all is how you conduct yourself with the health team and the patients and their families. If you are not a "people person," then you may want to look for an occupation that does not demand working with the public.)

C. Low dedication to work ethic

Examples: Continual tardiness, calling in sick at the last moment or not at all, poor grooming habits, dishonesty in your work, disloyalty to your place of employment, carelessness in what you do

(NOTE: Employers and the people you care for deserve your very best. You should strive to do your best and give the care and concern that you would want to receive. In return, you have the right to work in an atmosphere of appreciation for your efforts and one in which you are able to learn and grow in your profession.)

VIII. Ways to continue education in chosen field

A. In-service programs

Examples: New equipment updates, hospital programs, professional organizations

B. Junior colleges and universities

C. Courses offered by professional organizations

D. Adult education courses in vocational and technical schools

E. Proprietary schools

(NOTE: These are privately owned and operated schools that may offer short-term programs in health careers. If you decide to enter these schools, make sure you check their accreditation and reputation.)

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #1--PREPARE A RESUMÉ

NAME____________________ SCORE__________

Your resumé represents YOU on paper. This leaves the first impression of you with your prospective employer and may decide if you will get the interview. A GOOD RESUMÉ SHOULD IMMEDIATELY GIVE PROSPECTIVE EMPLOYERS A BRIEF SUMMARY OF YOUR ACCOMPLISHMENTS, EDUCATIONAL BACKGROUND, WORK EXPERIENCE, SKILLS, AND JOB OBJECTIVE. In short, what can you do for them?

Using the information given below, write a resumé to be included with your letter of application. You may use the same ad to write your letter of application or select another one from your local newspaper.

1. Inspect several resumé formats and choose one that best fits your needs or use the example on the following page as a guide.

2. Type your resumé on 8-1/2" x 11" white paper. Try not to exceed one page, but try to fill the page.

3. Use parallel constructions to insure a consistent writing style.

4. Phrase concisely but avoid using abbreviations.

5. Spell correctly. Many employers will not consider persons who have resumés that include misspelled words.

6. Put your name prominently at the top in the center or upper right-hand corner. Beneath your name, give your full street address, city, state, zip code, telephone number with area code, and a number where messages can be accepted.

   (NOTE: If you are applying for jobs out of town, leave space to type local phone number, address, and dates available.)

7. Do not include birthplace, age, health, height, weight, sex, marital status, photo, salary, or reasons for leaving job. Avoid mentioning religious and political affiliations.

   (NOTE: The whole point of the resumé is to get employers interested in meeting you in person. The above information may or may not come out in the interview, but by not including this information, there is little chance of discrimination. However, if you feel that you would benefit by adding the above information, you may do so.)

8. Describe your job objective or career goal briefly. Don't restrict yourself to a specific job unless you are quite experienced.

ASSIGNMENT SHEET #1

9. Describe your educational background, giving dates of enrollment, diplomas or degrees received, and names of schools attended. Include grade average (if favorable) and major course of study. If you include school grades, be sure they are related to the jobs you have in mind. If related, mention additional or graduate courses, scholarships, and summer school courses or workshops.

   (NOTE: Applicants with less than one year of work experience should list education before work experience; with more than one year, put experience first. IN RESUMÉ WRITING, ACCENT THE POSITIVE, ELIMINATE THE NEGATIVE.)

10. List your past employment, starting with the most recent job. Carefully examine all the jobs you've done, including extracurricular activities. CONCENTRATE ON THE SKILLS: don't categorize "summer jobs."

    (NOTE: The list should include the name of the company, your job title, and your major duties. The starting and termination dates for each job should be listed. Most employers ask during interviews why you left previous jobs. Try to be positive in stating your reasons for leaving a former job. Avoid downgrading your previous employers.)

11. List skills useful to the job. Remember, you have to prove your value to the company, especially if you have little experience.

    (NOTE: Use active verbs to indicate the specific tasks you performed, initiated, directed, or planned.)

    Examples: Use microscope for minor lab studies; perform venipuncture

12. Include the following information if it is relevant and if there is enough space: hobbies and interests, extracurricular activities, clubs, honors you have received.

13. List or be ready to list at least three persons whom you have asked to give you a positive recommendation.

    (NOTE: Use business references, teachers, and character references. Avoid listing relatives unless you have actually worked for them on a salaried basis. Include some method for prospective employer to acquire references.)

14. Write *confidential* at the top of the resumé and letter to alert the reader if you do not want your current employer to know you are looking for another job.

    (NOTE: Try to give a telephone number where you can receive confidential calls.)

15. Have local printer retype your resumé and reproduce several copies. Request white bond paper.

    (NOTE: Your resumé's physical appearance is VERY IMPORTANT. Avoid using ditto or carbon copies. Be sure to proofread the printer's work. Always bring extra copies to interview.)

ASSIGNMENT SHEET #1

SAMPLE RESUMÉ

CONFIDENTIAL

Jo Cross

Address	**Present**	**Permanent**
	1342 Normal Street Somewhere, Oklahoma 76543	Same
Job Objective	Career as medical office assistant	
Education	City High School, Somewhere, Oklahoma; 1975-1979	
	Advance Area Vo-Tech School, Somewhere, Oklahoma; 1979 Certificate: Medical Office Assistant Grade Average: 3.5 on a 4.0 scale	
Work Experience	Medical Plaza, Near City, Oklahoma; June 1978-1979 Duties included making appointments, typing records, and greeting patients	
	Pizzaria, Somewhere, Oklahoma; February 1977-August 1977 Recorded customers' orders, operated cash register, ordered supplies, and made pizzas	
Special Skills	Type 60 words per minute, use dictaphone, file records, use pegboard recordkeeping system, and use calculator	
School Activities	High School Glee Club, President of HOSA chapter, and member of Bomberettes Pep Squad	
References	Names and addresses of references will be listed on separate sheet	

(NOTE: Be prepared to have a completed list of names, addresses, and phone numbers of referenc[illegible] in advance of interview. Be sure that you have received permission from these persons and that they will give you a recommendation.)

ASSIGNMENT SHEET #1

VITA

JON RIGERS

MEDICAL ASSISTANT

Major Field: Medical Office and Business Management

Biographical:

Personal Data: Born in Somewhere, America, December 10, 1960

Education: Graduated from Progress High School, Progress, America, in May, 1977; completed the Medical Assistant Program at Delta Area Vocational-Technical School, May, 1977, and am attending Progression Junior College majoring in business. Certified by board exam CMA-A, January, 1980.

Professional Experience: Medical Assistant, Meyo-Medical Center, June 1977-August, 1978; Certified Medical Assistant, Administrative, State Emergency Medical Center, January, 1980.

Organizations: Health Occupations Students of America, Vice-President, 1976, President, 1977. State Medical Assistants Association, Northwest District, Secretary, 1979.

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #2--WRITE A COVER/APPLICATION LETTER

NAME_________________________ SCORE______________

The cover/application letter is a sales technique to tell the employer how your abilities will be useful to the company. The letter should specify your qualifications while the resumé gives general background information.

Use the sheet of ads at the end of this assignment sheet or select one from your local paper and write a cover/application letter to accompany the resumé you prepared in Assignment Sheet #1. Use the following information and the sample letters as guides.

(NOTE: If you cannot type, it is recommended that you write or print NEATLY using blue or black ink.)

1. Pay attention to form and appearance.
    a. Type or write neatly.
    b. Write on only one side of paper.
    c. Avoid smudges and typographical errors.
    d. Use 8 1/2" x 11" white bond paper, not personal or fancy paper.
    e. Spell, capitalize, and punctuate correctly.
    f. Put employer's full name, title, and address.
    g. Include your full name and address with zip code on the letter.
2. Include complete information.
    a. Write to a specific person.

       (NOTE: Find out the name of the person you want to reach and the correct title. When in doubt, write to the person who will refer your resumé to the right party. Use *To Whom It May Concern* if answering a blind ad.)
    b. Be brief; do not repeat information already in the resumé.
        1. State the position for which you are applying.
        2. Avoid needless details.
        3. Cover all points requested in the advertisement in exactly the order for which they are asked.

           (NOTE: Some prospective employers make it a point of testing the applicant's ability to follow directions.)

ASSIGNMENT SHEET #2

c. State reason for interest in job.

(NOTE: Employers look for people who look for future advancement opportunities rather than just a paycheck.)

d. Refer briefly to the main points in the attached resumé.

e. Mention that persons listed on the resumé have given their permission to serve as references.

f. Request interview at employer's convenience.

1. Tell where you can be reached.
2. Enclose self-addressed envelope and resumé.
3. Say you will phone next week.

3. Attract attention in opening paragraph.

Examples:

Dear Employer:

My experience in office management would be of interest to you.

Dear Employer:

Have you wished you had an assistant who has experience in performing basic laboratory tests and assisting with x-ray procedures? I might be the one.

Dear Employer:

____________ has informed me that you are in need of a person who can type quickly without error, make appointments, and assist with treatment efficiently. I believe my experience in the medical assistant program has taught me to handle these tasks in an appropriate manner.

4. End the letter properly.

(NOTE: *Sincerely yours* or *Very truly yours* is appropriate.)

5. Use permanent address for the return address and make sure to include the correct date.

6. Staple letter to resumé as it may be circulated to several departments and otherwise become detached.

ASSIGNMENT SHEET #2

7. Follow up and phone for an appointment a week later.

   (NOTE: Don't be surprised if the resumé has been referred to another department. Remember, they are in business and you may not get immediate attention, especially if you sent a blind letter. Do not give up, but keep trying until you reach the right person and ask for a convenient date to set up an interview.)

8. Keep in touch regarding possible openings now and in the future.

   (NOTE: The "job hunt" may take several weeks or even months. It's important to keep your contacts alive without being a nuisance.)

9. Read the sample application letters on the following pages.

   a. What are examples of poor form in the first application letter?

   ____

   ____

   ____

   ____

   ____

   ____

   b. How did the second letter improve? ______________________

   ____

   ____

   ____

   ____

   ____

10. Write your own letter on a separate piece of paper using one of the ads at the end of this assignment sheet.

THERE IS NO "BEST TIME" TO LOOK FOR A JOB, THE "BEST TIME" IS WHEN YOU AND THE JOBS ARE AVAILABLE.

ASSIGNMENT SHEET #2

Dr. B. Casey
609 Shining Knight Ave.
Castle Medical Clinic
Smalltown, U.S.A. zip code

Dear Ben,

I just love working with people and injoy the medical work. I saw an add in your paper and would like to talk to you about work.

I worked in an office about a year ago so I have some experience.

The school for Medical Assistants sounds interesting, and I think I will apply.

Will call you soon.

Your friend,
Nancy Nightengale

ASSIGNMENT SHEET #2

1505 N. Camelot
Smalltown, USA 12345
Date

Dr. Ben Casey
609 Shining Knight Avenue
Castle Medical Clinic
Smalltown, Oklahoma 44444

Dear Dr. Casey:

Please consider this letter an application for the position of medical assistant which you have advertised in the *Smalltown Daily Post*.

After graduating from high school, I worked part time at the Belltower Medical Complex as a receptionist. I took basic typing and bookkeeping courses in high school and enjoy working with people. I decided to enter the health field and have been attending the Lancelot Vo-Tech School Medical Assistant program. Graduation will take place August 5, 1980, and I will be ready for employment on August 10.

I would appreciate the opportunity to come in and talk with you at your convenience. I may be reached at the above address or by telephone at 399-9930.

Sincerely yours,

Nancy Nightengale

Nancy Nightengale

ASSIGNMENT SHEET #2

Medical Assistant

Full & part time. Duties will include assistance in exam room, simple lab & x-ray, Appt. scheduling, daily log, light typing. Hrs. available for full time Mon-Fri 8am-11:30pm, Sat-Sun 8am-8pm Day & Night. Minor ER Clinic, 5201 Classic, 824-1450

OB-GYN Clinic
Full time upfront
Medical Assistant needed. 8am-5pm Weekdays. No Holidays. Basic lab tests and clerical skills needed Call after 3:00 p.m. 450-2229.

MA FOR
CHILD CARE CLINIC CMA-Ped. needed to assist in basic diagnostic and treatment center for children. Lab. skills and x-ray exper. nec. Full time 7:30 am-6:30pm Weekdays Contact Ms. Wellington 734-9570

MEDICAL ASSISTANT
NEEDED IN UNIQUE MED. OFFICE
9:00am-4:00pm
NO SMOKING PLEASE Opp. right for qualified MA to work in biofeedback clinic. Must be willing to learn and have initiative. Write Box 10 Pinevalley Gen. Delivery

Medical Nurse. Private clinic, 8 to 5 Days. Salary negotiable. 932-4540

NEED IMMEDIATELY
Assistant in new weight control Medical Office. Needs clinical skills + eff. record keeping background. 9-4 daily and 9-12 Sat. Good pay, real challenge Call 758-4098 NOW

ONCOLOGY TREATMENT CENTER seeks Medical Assistant for comb. duties of clerical and clinical. Must be certified and have a least 3 yrs. exper. Will train in this spec. area. Salary DOE. Contact Dr. Temporal, Valley View Oncology Treatment Center.

CERTIFIED MEDICAL ASSISTANT
for Industry based office. Good hours fringe benefits, and wages depending on exper. Shifts available, some weekends and holidays. Contact Johnnie Mark
B & G Supplies, Inc.
4200 Industrial Blvd.
Equal Opp. Emp. M/F/

MEDICAL POSITIONS OPEN
Needs PNS, LPNS, NA, MAS, DOAS. Contact LOU at
POSITIVE PERSONNEL EMP. AGENCY 226-7878

DOCTOR'S ASST.
Exp. nec. typing, books, clinical skills. 9-5 Daily No holidays. Good benefits, Contact Dr. Welby, General Clinic 2452 West St.

POSITIONS OPEN
IN THE HEALTH FIELD
YOU ARE NEEDED FOR
CHALLENGING JOBS WITH
GOOD PAY & BENEFITS

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #3--COMPLETE EMPLOYMENT APPLICATION FORM

NAME________________________________ SCORE______________

Compare the following application forms using the guidelines below. Use information corresponding to the classified ad and to your letter of application. Use information about yourself from your resumé.

(NOTE: Although each facility uses its own form, general rules of preparation apply to any form. The second sample application form is designed for the health professions. Many employers will allow you to pick up an application and fill it out at home to be mailed or brought in later.)

1. Be prepared.
   a. Take pen and pencil with you.
   b. Take copies of your resumé and Social Security card.

   (NOTE: Be prepared to take some transcription, if you are asked.)
2. Look over entire form before starting to write; do not hurry.
3. Follow directions.
   a. Note whether information is to be printed or handwritten.
   b. Carry out all directions.
4. Write clearly, neatly, and legibly.
5. Answer briefly.
6. Be honest.
7. Answer all questions.

   (NOTE: If questions do not apply to you, write *not applicable* or *NA* in the space to show that you did not overlook the question.)
8. Include complete information; use resumé.
9. RECHECK application when finished.
10. Avoid cross-outs and obvious erasure marks.
11. Do not list any restrictions to the geographic area in which you would work unless you would absolutely not consider other geographic areas.
12. Use the word *open* for questions about minimum salary since most employers pay standardized rates and will not negotiate on this.

102-A

ASSIGNMENT SHEET #3

NIGHTENGALE MEMORIAL CLINIC
2825 Greenlawn Drive
Somewhere, Oklahoma 14326

APPLICATION FOR EMPLOYMENT

(Please type or print)

"An Equal Opportunity Employer"

Date____________________

Name_________________________________ Social Security No.____________________
(Last) (First) (Middle)

Shift you can work: Full time____ Part time____ Days____ Evenings____ Nites____

Position desired____________________________ Starting salary desired____________________

Address____
(City) (State) (Phone)

EDUCATION

Circle last year completed: Elementary 5 6 7 8 High 1 2 3 4

College 1 2 3 4 Graduate Work 1 2 3 4

List any degree_______________________ Date____________ School____________________

Do you type? Yes______ No______ wpm______ Shorthand? Yes______ No______ wpm______

Other qualifications:____
(Licenses, skill with machines, research work, etc.)

FOR PROFESSIONAL APPLICANTS ONLY:

Where did you receive your professional training?____________________________________

Registration or license number____

MEDICAL RECORDS

Have you had a serious illness in the past five years? Yes____ No____ (Describe)______________
____

In case of emergency, please notify____
____

Have you ever received compensation for injuries? Yes______ No______ (Explain)______________
____

Have you served in the Military Service? Yes______ No______ If yes, what branch?______________

Dates of duty______________ to______________ Rank at discharge____________________

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #4--USE TELEPHONE TO ARRANGE A JOB INTERVIEW

NAME______________________________ SCORE______________

Making an appointment by phone does two things. First, it shows that you are interested in saving the employer's time. Second, it shows that you are thoughtful for asking what would be the best time for the employer to see you.

Role play a situation where you make an appointment by phone using the guidelines listed below. After you have completed the roleplay use the checklist on the following page to check your performance.

Follow these steps in making an appointment by phone:

1. Plan what you are going to say before you call.

   (NOTE: Outline in writing, if necessary, the main points you wish to cover.)

2. State your name and reason for calling.

   Example: "Hello, this is Marion Moss and i'm calling about your ad in the *Sometown Daily News* for a medical assistant. I would like to make an appointment for an interview."

3. Ask when would be the best time for you to come for the interview.

4. Record the day, time, and place of the interview.

5. Thank the receptionist.

Remember these things when calling for an appointment:

1. Keep the receptionist on your side. He/she is there to help you.

   (NOTE: The receptionist is sometimes asked to evaluate the applicant.)

2. Do not ask over the phone how much the job pays.

3. Be polite and courteous. Remember that this call is the first contact you may have with the firm. Make that first impression a good one.

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #5--PARTICIPATE IN A JOB INTERVIEW

NAME________________________________ SCORE______________

Now that you are prepared for an interview, team up with another student in class. Assume the roles of interviewer and applicant and then switch so each of you gets to play both roles. Apply for the job you now have or for the one for which you wrote the letter of application. Let your other classmates evaluate your performance using the job interview evaluation form below. Use the sample interview that follows for your roleplay.

(NOTE: Videotape the practice sessions if possible.)

JOB INTERVIEW EVALUATION FORM

	YES	NO
Preparing for the Interview		
1. Were you clean, well-groomed, and neat?		
2. Did you wear appropriate clothes and shoes for the type of job for which you applied?		
3. Did you take an ink pen and resume with the information about Social Security number, references, addresses, dates employed, and dates attended school?		
4. Did you go alone, not taking parents or friends with you?		
5. Were you on time for the interview?		
6. Did you know the name and title of the interviewer?		
7. Did you know pertinent facts about the office, such as name, kind of facility, services, reasons you want to work there, and what specialty areas are available?		

ASSIGNMENT SHEET #5

	YES	NO
8. When you met the receptionist did you smile, introduce yourself, state that you had an appointment, follow the receptionist's instructions, and wait patiently?		
9. Did you enter with poise and greet the interviewer by name?		
Participating in the Interview		
10. Did you shake hands firmly if the interviewer offered?		
11. Did you introduce yourself and state the purpose of the call?		
12. Did you seat yourself only at the interviewer's invitation?		
13. Did you show signs of nervousness?		
14. Did you not place personal things on interviewer's desk, smoke, or chew gum?		
15. Did you look alert, interested, and enthusiastic? (NOTE: Sit slightly forward in the chair to give an alert appearance.)		
16. Were you confident and courteous? (NOTE: Words such as *Mr., Ms., Miss, Mrs., please, thank you, ma'am,* and *sir* never go out of style.)		
17. Did you answer questions clearly and not interrupt?		
Anticipating Questions and Volunteering Proper Information		
18. Did you avoid just giving all yes and no answers?		
19. Did you avoid criticisms of former employers or competitors?		

ASSIGNMENT SHEET #5

	YES	NO
20. Did you avoid talking about personal problems? (NOTE: The interviewer must be interested more in what you can contribute to the facility than what the business can do for you. Do not use a sob story about how desperate you are for a job.)		
21. Did you show copies of your work, if applicable?		
22. Did you state that you are willing to start at the beginning salary?		
23. Did you find a true, positive statement concerning your reasons for leaving previous jobs, even if you were fired? Examples: "I was laid off, but I learned from my mistakes." "I left because they did not need as many employees due to low patient census."		
24. Did you try to mention your best qualities in relation to something concrete? Example: "I earned seventy-five percent of my expenses while going to school" is better than "I am a hard worker and want to get ahead"		
25. Did you give the lead back to the interviewer if you found yourself talking too long, by saying, "Perhaps you have some other questions to ask me?"		

ASSIGNMENT SHEET #5

	YES	NO
26. Were you prepared for personal questions about your home life and your parents occupations? (NOTE: Even though these kinds of questions are illegal, you may have to deal with them. Have a suitable answer ready.)		
27. Did you avoid questions concerning politics or economics?		
28. Did you answer questions about career objectives using specific terms about what you would like to do in the near future in your particular field without limiting your opportunities? Example: A career in the health field that will lead to a certification as a medical assistant. No locational preference		
29. Did you look directly at the interviewer, smile, use correct English, and speak in clear moderate tones? (NOTE: Avoid swearing or using slang terms.)		
30. Did you show an interest in the facility by asking questions about it?		
31. Did you really try to sell yourself? (NOTE: Never refer to yourself as just average or fair. Always look for a positive response.)		

ASSIGNMENT SHEET #5

	YES	NO
32. Did you give the interviewer the opportunity to mention salary and fringe benefit? (NOTE: If not mentioned, ask about promotions, malpractice insurance, health insurance, discounts on health care, and uniform allowance, if applicable.)		
33. Did you remind the interviewer of the conversation topic if interrupted by a telephone call?		
Closing the Interview		
34. Did you watch for signs that the interview was over, such as the interviewer shuffling papers and moving around in the chair?		
35. Did you ask "May I say one thing more?" or "Would you be interested in . . .?" if the interview seemed to be ending before all important selling points had been made?		
36. Did you thank the interviewer for allowing time for you and leave promptly?		
Following-up the Interview		
37. Did you write a thank-you letter, call, or visit again to express interest in the job and appreciation for the opportunity to interview?		

(NOTE: EVEN IF THE INTERVIEWER DOES NOT OFFER THE POSITION, YOU SHOULD LEARN FROM EVERY SITUATION AND TRY TO IMPROVE YOUR INTERVIEWING TECHNIQUES.)

ASSIGNMENT SHEET #5

SAMPLE JOB INTERVIEW

(NOTE: Pair up with another student, rehearse this script, and roleplay for the class to show how an interview might be conducted. You may want to write your own script and set up your own simulation of an interview.)

A = Applicant

I = Interviewer

A (Enters, pauses, smiles, and approaches Dr. Bloom and shakes extended hand) Hello, I am Virginia Blossom and am applying for the job which you advertised in the *Goodcity Gazette*.

I Hello, Ms. Blossom. Won't you have a seat?

A Thank you. I have a resumé which may be helpful to you. (Hands Dr. Bloom the resumé and sits down.)

I This is a very well-prepared data sheet. Well, Virginia, tell me about your training and experience.

A I completed the medical assistant course in May at the Success Vo-Tech School and worked part time in the Multi-Medical Center in Metropolitan.

I Have you had much experience in working with minor surgery cases?

A Yes, the physicians in Metropolitan had a small minor surgery suite that they shared and I was trained to assist.

I The position here calls for the assistant to do mostly clinical procedures, but you may be called on to assist with clerical duties occasionally.

A I have had the basic training and experience to work with the pegboard record keeping system. I also can type sixty words per minute and use the dictaphone.

I Are you interested in continuing your education? We do like our employees to attend various in-service programs to update knowledge and skills. Of course, we pay the tuition for you to attend.

A Yes, I want to study and take the certification board and become a Certified Medical Assistant with a specialty in clinic. I would be more than happy to attend any courses offered.

I When would you be able to begin working for us?

A I am in the process of moving to Goodcity now so I could be ready to begin working for you in a week.

ASSIGNMENT SHEET #5

I Ms. Blossom, it sounds as if you might be just what I am looking for. Why don't you look over this handbook we have made up for our clinical staff and I will contact you next week. If you have any questions, we can discuss them then. We have excellent benefits here at the clinic and salary is negotiable according to your experience.

A Thank you. I will be waiting for your call and I will look over the handbook. (Stands) Thank you for your time Dr. Bloom. (Shakes hands and leaves.)

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #6--EVALUATE A JOB OFFER

NAME______________________________ SCORE______________

Imagine . . . your first job interview is minutes away. Countdown 5-4-3-2-1!

You enter the employer's office . . . questions . . . answers . . . you continue to feel nervous inside but appear cool outside . . . questions . . . more answers . . . the employer offers you the job!

Grab it? What a relief--no more job interviews! WAIT!!! Instead of saying yes or no on the spot to a job offer, express your gratitude in a warm and friendly manner and then ask if you may have a day to consider the opportunity you have been offered. Few reputable employers will deny you a reasonable time to be certain before agreeing to take a job.

Avoid getting stuck with a job that's wrong for you by using the checklist to evaluate the job offer!

THE JOB . . .

☐ Do I clearly understand the nature of the work and is it what I want to do? Is there a written job description? Are my responsibilities reflected in the job title?

☐ If this isn't my dream job, can it be a stepping stone as I acquire the skills and experience needed for advancement?

☐ Is the background I'm building so narrow that I will have difficulty transferring it to another employer?

☐ Will I be able to make any decisions affecting my work? Do I care?

☐ Will I need more training and will the facility pay for it?

☐ Will overtime be necessary or available?

☐ Will I be able to leave all thought of the job behind at day's end? If not, do I care?

☐ Will I travel or relocate?

☐ Will I be proud to tell my friends what I do?

☐ Is the job permanent or temporary?

☐ If permanent, is there reasonable job security?

☐ Does this job require union membership?

ASSIGNMENT SHEET #6

THE FACILITY . . .

☐ Is the facility too large, impersonal, and rule-oriented for my personality?

☐ Is the facility too small to offer room for advancement or impressive credentials for a future resumé?

☐ Does the facility have a healthy financial position and is it a growing organization?

☐ Is there a high turnover of personnel and if so, why?

☐ Does the facility promote from within the ranks or turn to outsiders to fill supervisory jobs?

☐ Have I met the person who would be my immediate supervisor?

☐ Does the supervisor seem like the sort of person with whom I could get along?

☐ Do co-workers appear to be easy to get along with?

☐ Is the facility's location convenient?

☐ Is the physical setting okay (adequate light, ventilation, cleanliness)?

☐ What is the facility's reputation for fair treatment of employees?

☐ Is a written personnel statement available that covers vacations, sick leave, cause for dismissal, and so forth?

FINANCIAL REWARDS . . .

☐ Do the earnings meet my minimum needs? Are there automatic cost-of-living increases?

☐ What is the method of payment (salary, hourly wage, overtime or shift differential)?

☐ Are raises based on merit, length of service, certification, continuing education hours?

☐ What fringe benefits are given (health insurance, free parking, discount privileges, malpractice insurance, uniform allowance, and others)?

WHEN TO SAY NO . . .

Should you always turn down an offer that doesn't measure up?

That depends on several questions. How desperately do you need to earn money? How competitive is the field you hope to enter? Would it be best to get your foot in the door any way you can? How valuable is the experience you'll gain? There are times when it is wise to accept a job which is not perfect in your eyes.

ASSIGNMENT SHEET #6

On the other hand. . .if both your logical thinking and gut feeling are bad, it may be best to say thanks, but no thanks, and look elsewhere.

Adapted from "If Things Don't Shape Up, I May Not Take the Job," *Career World*, February, 1977.

CAREER SUCCESS
UNIT III

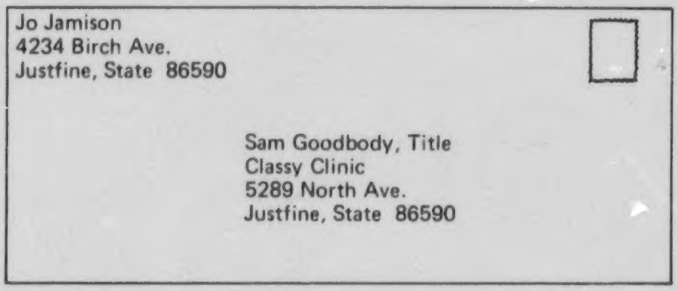
ASSIGNMENT SHEET #7--WRITE A FOLLOW-UP LETTER

NAME____________________________ SCORE________________

1. Write a follow-up letter thanking the employer for the interview. Use any form you wish or follow the format of the sample follow-up letter on the following page.
2. Make sure your letter meets the following standards:
   a. Typed or written perfectly.
   b. Clean, neat, and attractively arranged on the paper.
   c. Free from spelling, punctuation, and grammatical errors.
   d. Sent within a day or two after the interview.
3. Include the following points in your follow-up letter:
   a. Expression of appreciation for interviewer's time and interest.
   b. Summary of your qualifications and interest in that position.
   c. Your name, address, and phone number (to make it easier for your employer to contact you).
4. Make this last bid for the job a prime example of your excellent work habits. Make the letter as clean, neat, and well-worded as you possibly can.
5. Address a legal-sized envelope (Figure 1)

   (NOTE: Be sure and type the address EXACTLY the same as the inside address of the letter.)

FIGURE 1



Jo Jamison
4234 Birch Ave.
Justfine, State 86590

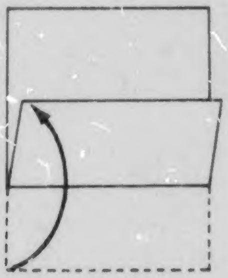
Sam Goodbody, Title
Classy Clinic
5289 North Ave.
Justfine, State 86590

ASSIGNMENT SHEET #7

6. Fold letter

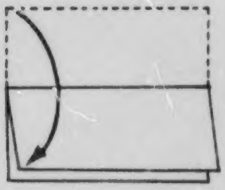
   a. Fold slightly less than one-third of the letter toward the top (Figure 2)

FIGURE 2



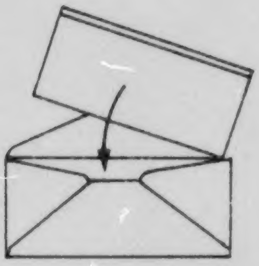
   b. Fold down the top of the letter to within 1/2" of the bottom fold (Figure 3)

FIGURE 3



7. Insert the letter into the envelope with the first crease toward the bottom of the envelope (Figure 4)

FIGURE 4



ASSIGNMENT SHEET #7

SAMPLE FOLLOW-UP LETTER

4234 Birch Ave.
Justfine, State 86590
Date

Sam Goodbody, Title
Classy Clinic
5289 North Ave.
Justfine, Oklahoma 86590

Dear Dr. Goodbody:

Thank you for interviewing me for the job as medical assistant in your clinic. I feel that the opportunity and learning experience would be excellent for me and hope that I will have the opportunity to assist you and your staff.

Enclosed you will find the application form you gave to me.

I will be available for work May 1. I may be reached at my home after 4:00 p.m. My telephone number is (123) 425-1144.

Sincerely yours,

Jo Jamison

Jo Jamison

Enclosure

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #8--COMPARE JOB OPPORTUNITIES

NAME ____________________ SCORE ____________

When you are offered a job or are changing jobs, there are many factors to weigh before taking the position. Some of these include:

- What is your take-home pay?
- What are the benefits which accompany the job?
- How much will it cost to actually be at work each day?
- Would the job be satisfying to you?
- How would the job meet your needs and aspirations?

WHAT'S MY TAKE-HOME PAY?

Salaries and wages are often quoted by employers as gross earnings. Gross earnings are used because tax deductions vary due to the number of dependents, the amount of earnings, and other information.

Optional benefits and deductions offered by an employer also differ. It is generally advisable to ask what programs are available for enrollment as these can affect the actual money you receive on payday.

WHAT OTHER BENEFITS DO I GET FROM THIS JOB?

Some benefits associated with working are not always visible. Often some of these overlooked benefits are paid for in part by your employer. At the time of the interview or when considering a position ask about them.

Employer's contributions for your protection may include:

- Health insurance
- Malpractice insurance
- Profit sharing
- Credit union
- Unemployment compensation
- Worker's uniforms
- Medical facilities and health tests
- Pensions

ASSIGNMENT SHEET #8

- Travel insurance (covering mishaps when traveling on business)
- Education programs or reimbursement for courses related to job
- Sick leave with pay
- Paid vacations and holidays
- Discount privileges, such as discounts on merchandise or services related to the job

WHAT WILL IT COST TO WORK AT THIS JOB?

Frequently we overlook the costs which are associated with being employed. It may be of value to calculate estimated weekly expenses before you make a decision about a job.

Estimate weekly expenses for:

Transportation	$________	Gifts for other employees	$________
Lunches (or cost of food eaten away from home, including soft drinks and coffee)	$________	Special materials, uniforms, or equipment for the job	$________
Clothing (including cleaning)	$________	Other	$________
Child care for working parent	$________	TOTAL:	$________

WHAT'S IMPORTANT TO YOU IN A JOB?

Take-home pay and benefits may be only part of what you want from a job. Think through what other things you consider important in a job.

What are some of the most rewarding things you've felt about any job you've ever done?

1. ____

2. ____

3. ____

ASSIGNMENT SHEET #8

On a scale of 1 to 10, how might you rate these in order of what's important to you?

_____ Job security (little chance you'll be released from the job)

_____ Opportunity for advancement

_____ Recognition for your work

_____ Good wages

_____ Opportunity to learn and use your ideas

_____ Flexible working hours and long vacations

_____ Pleasant working conditions

_____ Interesting work

_____ Friendly co-workers

_____ Other, such as ____

ARE YOU READY TO DECIDE???

Now try to take all the information you have gathered and summarize it below to reach a decision about whether you want the job or not.

1. Would the job be satisfying to you? Why or why not?

____

____

____

2. What are the benefits which accompany the job?

____

____

____

3. How much will it cost to actually be at work each day?

____

____

____

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #9--ASK FOR A RAISE

NAME________________________________ SCORE______________

Asking for a raise . . . the ideal situation exists when true merit is recognized and never needs to be called to the employer's attention. If your situation is not ideal, what can you do? Obviously, there is only one answer: you must bring the matter up; you must ask for a raise.

Use the guidelines below to role play asking for a raise with another student or a resource person provided by your teacher.

1. BEFORE YOU SPEAK AT ALL, PRECEDE YOUR REQUEST WITH CONSIDERABLE THOUGHT AND STUDY.
2. Determine if you are justified in asking for a promotion or a raise by making out a good case for yourself in writing. BE OBJECTIVE!!!

   Examples: What about your production?

   Is there a standard for your work in your office?

   If so, how does your production compare with this standard?

   How many patients have you handled without a complaint?

   What additional skills have you acquired since you were hired?

   If you were to take an employment test at this point, would you do significantly better than on the one you took when you applied for your job?
3. Check your attitudes and work habits.

   Examples: Are you always prompt in arriving for work?

   Do you work overtime without complaint when it is necessary?

   How many days of work have you missed because of illness?

   Are you considered cooperative by your supervisors and your co-workers?

   When you finish the work assigned, do you find something else to do?
4. Ask your employer for an appointment.
5. Bring your notes with you to your interview.

   Example: "____________, I have enjoyed my work here very much. You may be interested in the progress I have made since I was hired two years ago."

ASSIGNMENT SHEET #9

6. Explain the progress.

   (NOTE: If you are confident of your worth, you will be able to respond pleasantly to any gruffness or lack of enthusiasm on your employer's part. If the employer challenges your statements, see that you neither back down nor become defensive. Simply and calmly bring up the case that you have prepared. After all, it is merely another employment interview, and you passed the first one.)

7. Thank your employer for the interview and for the time spent.

8. Leave.

   (NOTE: Go back to your work and be patient. Even if your employer has seemed impressed with your facts you must not expect your raise at once. The employer may intend to grant your request after conferring with other members of the firm. DON'T RUIN A GOOD CASE BY BECOMING A NUISANCE.)

9. Ask your employer if any decision has been made after two weeks.

   (NOTE: KEEP YOUR TONE FRIENDLY BUT IMPERSONAL! TOO MUCH EMOTION HAS RUINED MORE THAN ONE GOOD CAUSE. Even though you may deserve a raise, circumstances, such as budget, may prevent your employer from giving you a raise.)

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #10--WRITE A LETTER OF RESIGNATION

NAME_______________________________ SCORE_______________

It is not unusual for a person to change jobs a number of times before finding a position regarded as permanent. Part of total career success involves notifying your present employer of your departure in a positive way. How do you leave with a good impression?

Sometimes a letter is necessary because of the distance involved or the difficulty of arranging an interview with the proper official. If notice can be given in person, you should do so. It is a forthright, open-handed, and natural method. It usually takes little time, but it affords the opportunity for a discussion which could lead to improved understanding and perhaps other advantages.

A good letter of resignation, including one that merely confirms a conversation, has many possible advantages. Written in a spirit of friendliness and cooperation, it can be a valuable addition to your personnel file. Later on, if supplying a recommendation, a supervisor may wish to see your file to refresh his/her memory about you. Your "exit" letter will show that you apparently left on friendly terms and gave notice in writing. Under the principle of "all's well that ends well," the letter may cause a better recommendation than would otherwise be written. It can also provide a favorable climate for you to rejoin the company, if unforeseen events bring you back to the door.

Use the guidelines below and the sample letter to write a letter of resignation.

1. Address the letter to the nearest supervisor or department head above you.

2. Imply that your departure will be an inconvenience.

3. Begin with a statement that will be of interest and will appeal to your reader.

   Examples: Show appreciation for the months/years of employment under this company's management

   Acknowledge the confidence placed in you by various advancements

   Comment on the rewarding experience you have acquired under the supervisor's direction

   (NOTE: The purpose of this is to place your reader in a relaxed frame of mind to be receptive to the message that follows.)

4. Give positive reasons for going to the new job; avoid negative reasons for leaving the job.

5. Mention the name of the new employer and the position you are to fill.

ASSIGNMENT SHEET #10

6. Give an appropriate time notice.

   (NOTE: This time interval should be reasonable enough to allow the company to get a suitable replacement. There is no set time that can be quoted--sometimes a month, sometimes an even longer period of time. Usually the higher you are in the organization, the more likely it is that you should give notice of a month or more.)

7. End on a constructive or encouraging note.

   Examples: Request a personal interview to explain in great detail

   Offer to extend the departure date, if possible, while a replacement is being found

   Suggest a possible replacement if that is not out of place

   Simply offer to be available to help in the transition as you are needed

ASSIGNMENT SHEET #10

SAMPLE RESIGNATION LETTER

June 1, 1980

Dr. R. Redford
Busy Medi Center
1313 Galloway
Metropolitan, Oklahoma 12345

Dear Dr. Redford:

Two weeks ago I had no idea that I might be writing you this letter. I must say my two years here at the Busy Medi Clinic have been rewarding and valuable. I appreciate all the guidance and educational opportunities given to me.

Last week, however, I received an excellent job offer which will enable me to progress in the field of education. Placid Adult Education Center in my home town of Success has offered me the job as an instructor in their Medical Assistant program. I have always wanted an opportunity to teach and I will be attending Success University to continue my education.

I have decided to accept the offer and will be moving to Success on July 1, 1980. This will give you time to find someone to be trained for my position. In the month before I leave I can assist in training the new assistant in the clinic's operating procedures.

If there is anything else I can do to help the office prepare for my departure, I shall be happy to be of service.

Respectfully yours,

Diana Kelly

Diana Kelly

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #11--EVALUATE PERSONAL HABITS ASSOCIATED WITH CAREER SUCCESS

NAME________________________________ SCORE________________

Good habits are necessary in order to establish good human relations and a good relationship with co-workers, employer, and clients. Complete the evaluation below and then answer the questions that follow.

(NOTE: If you have not yet been employed, base your evaluation on "work situations" in the classroom.)

	YES	NO
WORKING WITH CO-WORKERS (OR STUDENTS)		
Do you do your own work and not leave it for someone else to do?		
Do you clean up after yourself?		
Are you willing to learn from others about how to do a job better?		
Do you contribute to morale and team spirit at a place of business?		
Do you learn names of people with whom you work as soon as possible?		
Do you take a sincere interest in co-workers, their families, and their interests?		
Are you a good listener?		
Do you admit mistakes without making excuses?		
Do you assume blame for things that are your fault?		
Do you avoid gossip?		
Do you support co-workers?		
WORKING WITH EMPLOYER (OR TEACHER)		
Are you cheerful?		
Do you feel your job is a privilege, not a right?		

ASSIGNMENT SHEET #11

	YES	NO
Do you try always to do the best you can?		
Do you know your job?		
Are you on the job unless excused?		
Are you on time and ready to work? (NOTE: Do a day's work for a day's pay!)		
Do you try to avoid waste of all kinds (material, time, equipment)?		
Do you look for a better way to do the job?		
Do you tell the truth and are you sincere?		
Do you ask questions when you need help?		
Do you try to see the employer's side when there is a problem?		
WORKING WITH PATIENTS		
Do you know what is expected of you and do your job well?		
Do you give professional treatment to patients?		
Do you keep promises made to patients?		
Are you polite to patients?		
Do you recognize patients as buyers of your service and give them their money's worth?		
Are you sincere?		
Do you smile?		
Are you friendly, interested, and sympathetic?		
Do you gain the patient's confidence and listen?		

ASSIGNMENT SHEET #11

	YES	NO
Do you try not to rush the patients?		
Do you avoid arguing with an angry patient?		
Do you avoid comments that might upset a patient?		
Do you refer matters you cannot handle to a supervisor?		
Do you treat each patient as an individual?		
Do you take pride in winning a patient's friendship?		

1. What do you feel are your strengths in personal habits associated with career success?

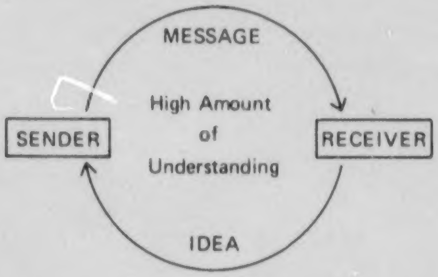
2. What do you feel are your weaknesses in personal habits associated with career success?

CAREER SUCCESS
UNIT III

ASSIGNMENT SHEET #12—IMPROVE LISTENING SKILLS

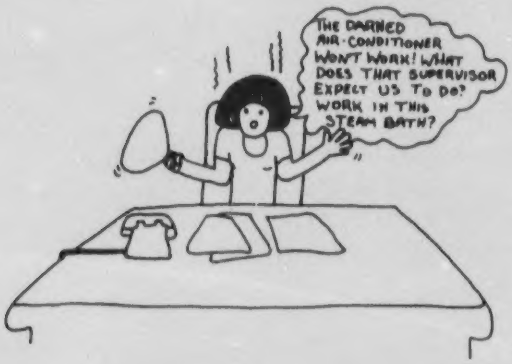
NAME______________________________ SCORE______________

Communication is the sharing of a message or an idea which results in a high amount of understanding between the sender and the receiver of the message.


MESSAGE
SENDER
High Amount of Understanding
RECEIVER
IDEA

SHARING AND UNDERSTANDING ARE THE KEY WORDS!!! MEANINGS ARE IN PEOPLE, NOT IN WORDS.

Listening is one key to effective communication! Effective listening requires two skills: the ability to listen for facts and the ability to listen for feelings. Listening for facts comes more naturally than listening for feelings!


THE DARNED AIR-CONDITIONER WON'T WORK! WHAT DOES THAT SUPERVISOR EXPECT US TO DO? WORK IN THIS STEAM BATH?

1. What are the facts in the above message?

____

____

____

ASSIGNMENT SHEET #12

2. What are the feelings in this message?

(NOTE: When a person's expressed feelings are ignored the first time around, that person will usually make a second attempt to express their feelings! LISTEN!!!)

This activity will give you practice in listening for feelings as well as for facts. Remember that most people can get the facts in a message. It is more difficult to listen for feelings. However, the true message lies in the combination of both the facts and feelings.

Four students, two for and two against, should debate the following statement: "Capital punishment reduces the crime rate." Listen to the arguments and then answer the following questions.

1. What problems come up when the opposing side forgets to listen for feelings?

2. Why is it difficult to get agreement on feelings?

3. How often did the opposing side mistake feelings for fact?

ASSIGNMENT SHEET #12

4. Why is it more difficult to find proof for feelings than for statements of fact?

____

____

____

5. What communication barriers arise when false opinions and feelings get in the way of listening?

____

____

____

6. Did the audience let their own sentiments and attitudes affect the way they heard the argument?

____

____

____

____

Adapted from *Human Relations in Business*. Dallas: South-Western Publishing Co., 1977.

MA - 139-A

CAREER SUCCESS
UNIT III

TEST

NAME______________________________ SCORE______________

1. Match terms associated with career success to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Advertisement telling what kind of job is available and what qualifications are required

_____b. Printed form on which job applicant records information about personal history, job history, job experience, education, and references

_____c. Written summary of information about an individual that would be of interest to a prospective employer; may also be referred to as a personal data sheet

_____d. Business designed to help individuals find jobs

_____e. Code or standard of behavior; professional conduct

_____f. Feelings about people, things, and ideas

_____g. Classified advertisement that does not identify the advertiser

_____h. Acquired action that has become automatic; tendency to perform a certain action

_____i. Meeting of prospective employer and job applicant for evaluation and questioning

_____j. Continuous process of getting along with people

_____k. Classified advertisement placed by individual seeking employment and indicating job seeker's qualifications

_____l. Information about a job and the skills needed to perform the job

_____m. On-going alterness for any new knowledge or training

1. Employment application form
2. Employment agency
3. Habit
4. Attitude
5. Resume
6. Blind ad
7. Help wanted ad
8. Ethics
9. Interview
10. Human relations
11. Learning attitude
12. Liability insurance
13. Communication
14. Technical knowledge
15. Job enrichment program
16. Employment/situation wanted ad
17. Vita

_____n. Sharing of a message or idea which results in clear understanding between the sender and the receiver of the message

_____o. Activity designed for technical development and worker improvement; may be in the form of a seminar, workshop, or short conference

_____p. Policy that covers health worker in case of accident or injury to person receiving care

_____q. Brief, autobiographical sketch

2. Arrange in order steps to take in finding and securing a job by placing a "1" for the first step, a "2" for the second step, and so on in the blanks provided.

_____a. Estimate salary

_____b. Make a list of possible contacts to help you in your job search

_____c. Write down a complete self-inventory

_____d. Prepare for a job interview

_____e. Make a list of employer possibilities

3. Name sources for locating employment opportunities.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

4. Distinguish between types of employment agencies. Write "PR" before descriptions of private agencies and a "PU" before public agencies in the correct blanks. (Blanks may have more than one correct answer.)

_____a. Do not charge placement fee for services

_____b. Are controlled by state laws

_____c. Give helpful aptitude tests and counseling if needed

_____d. Collect fee when employment is secured

_____e. Are supported by state or federal government funds

_____f. Charge placement fee for services

_____g. Request signed contract between you and agency

5. Select from the following list guidelines for dressing for an interview. Mark each correct answer with an "X."

_____a. Consider type of job

_____b. Wear high-fashion clothes

_____c. Dress to fit salary range

_____d. Consider age of interviewer

_____e. Coordinate clothing

_____f. Dress to get the interviewer's attention

_____g. Be well-groomed

_____h. Be conservative and modest

6. Discuss ways to increase self-satisfaction in a career.

____

____

____

____

____

____

7. Select from the following list reasons people lose jobs. Mark each correct answer with an "X."

_____a. Low dedication to work ethic

_____b. Lack of assertiveness and suggestions

_____c. Assuming more responsibilities

_____d. Poor human relations and attitude

_____e. Lack of technical knowledge

8. List ways to continue education in chosen field.

a. ____

b. ____

c. ____

d. ____

e. ____

9. Prepare a resumé.

10. Write a cover/application letter.

11. Complete employment application form.

12. Use telephone to arrange a job interview.

13. Participate in a job interview.

14. Evaluate a job offer.

15. Write a follow-up letter.

16. Compare job opportunities.

17. Ask for a raise.

18. Write a letter of resignation.

19. Evaluate personal habits associated with career success.

20. Improve listening skills.

(NOTE: If activities 9-20 have not been finished before the test, ask the instructor when they should be completed.)

CAREER SUCCESS
UNIT III

ANSWERS TO TEST

1. a. 7
   b. 1
   c. 5
   d. 2
   e. 8
   f. 4
   g. 6
   h. 3
   i. 9
   j. 10
   k. 16
   l. 14
   m. 11
   n. 13
   o. 15
   p. 12
   q. 17
2. a. 5
   b. 3
   c. 1
   d. 4
   e. 2
3. a. Other people
   b. Newspapers

c. Employment agencies

d. Former employers

e. Personnel offices of health facilities

f. School placement services

g. Professional journals and newsletters

4. a. PU

   b. PR, PU

   c. PU

   d. PR

   e. PU

   f. PR

   g. PR

5. a, c, d, e, g, h

6. Discussion should include:

   a. Have a positive attitude

   b. Be enthusiastic

   c. Keep an open mind

   d. Read all the journals, newsletters, and textbooks available that pertain to your profession

   e. Join and be active in your professional organizations

   f. Volunteer to attend any workshops or in-service programs that your institution might offer

7. a, d, e

8. a. In-service programs

   b. Junior colleges and universities

   c. Courses offered by professional organizations

   d. Adult education courses in vocational and technical schools

   e. Proprietary schools

9. Evaluated to the satisfaction of the instructor
10. Evaluated to the satisfaction of the instructor
11. Evaluated to the satisfaction of the instructor
12. Evaluated to the satisfaction of the instructor
13. Evaluated to the satisfaction of the instructor
14. Evaluated to the satisfaction of the instructor
15. Evaluated to the satisfaction of the instructor
16. Evaluated to the satisfaction of the instructor
17. Evaluated to the satisfaction of the instructor
18. Evaluated to the satisfaction of the instructor
19. Evaluated to the satisfaction of the instructor
20. Evaluated to the satisfaction of the instructor

BODY PLANES AND CAVITIES
UNIT I

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of body planes and cavities to assist efficiently with procedures, treatment, and care of patients in the medical office. This knowledge will be evidenced by completion of the job sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with body planes and cavities to the correct definitions.
2. Label directional terms on a diagram of the body.
3. Match the anatomical planes of the body to the correct descriptions.
4. Label body cavities.
5. Distinguish between cavities containing body organs.
6. Name the abdominopelvic quadrants of the body.
7. Label the abdominopelvic regions of the body.
8. Describe basic components of a cell.
9. Match terms associated with the physical exchanges that occur through cell membranes to the correct definitions.
10. Label various body positions used in the medical office.
11. Demonstrate the ability to drape patients for common diagnostic procedures.

BODY PLANES AND CAVITIES
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and job sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information sheet.

   F. Demonstrate and discuss procedures outlined in job sheet.

   G. Provide equipment for students to use in completing job sheet.

   H. Use body models to demonstrate body cavities and organs.

   I. Obtain animal organs from meat market to demonstrate anatomy to students.

   J. Give students an opportunity to roleplay positioning classmates during performance of Job Sheet #1.

   K. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--Directions

      2. TM 2--Directions (Continued)

      3. TM 3--Planes

      4. TM 4--Body Cavities: Side View

      5. TM 5--Quadrants of the Abdominopelvic Area

      6. TM 6--Regions of the Abdominopelvic Area

      7. TM 7--Basic Components of a Cell

      8. TM 8--Physical Transport Methods of Cells

D. Job Sheet #1--Drape Patients for Common Diagnostic Procedures

E. Test

F. Answers to test

III. Unit references:

A. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease*. Philadelphia: J. B. Lippincott Company, 1977.

B. Cooper, Marian G., and Bredow, Miriam. *The Medical Assistant*. 4th ed. New York: McGraw-Hill Book Company, 1978.

C. Scherer, Jeanne C. *Introductory Medical-Surgical Nursing*. Philadelphia: J.B. Lippincott Company, 1977.

IV. Additional materials:

A. Films

(NOTE: The following films are available in Oklahoma from the American Cancer Society, 1312 N.W. 24th Street, Oklahoma City, Oklahoma 73106, or, contact your local Cancer Society Chapter concerning the availability of these films.)

1. "The Embattled Cell." Color, 21 minutes, American Cancer Society, 1968.

2. "From One Cell." Color, 21 minutes. American Cancer Society, 1950.

3. "The Human Cell and the Cytotechnologist." Color, 23 minutes. American Cancer Society, 1957.

B. Filmstrip--"Introduction to Cellular Metabolism." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

BODY PLANES AND CAVITIES
UNIT I

INFORMATION SHEET

I. Terms and definitions

   A. Cell--Mass of protoplasm that when grouped together carries on all functions of the body; groups comprise tissues

   B. Membrane--Thin, pliable layer of tissue that lines a tube or cavity, covers an organ, or separates one organ from another

   C. Organs--Tissues of a specific form that group together to form systems

   D. Peritoneal--Referring to the peritoneum or the area that contains abdominal organs

   E. Peritoneum--Sheets of serous membrane that line the abdominal walls

   F. Protoplasm--Thick substance which forms basis for all living activities

   G. Retroperitoneal--Located behind the peritoneum

   H. Systems--Groups of organs that carry out specific body functions

   I. Tissues--Specialized groups of cells that are specific to a function and form organs

II. Directional terms (Transparencies 1 and 2)

   A. Medial

   B. Lateral

   C. Posterior

   D. Anterior

   E. Superior

   F. Inferior

   G. Central

   H. Peripheral

   I. Cranial

   J. Caudal

INFORMATION SHEET

K. Proximal

L. Distal

III. Anatomical planes (Transparency 3)

A. Sagittal--Imaginary line from head to foot dividing the body into a right and left part

B. Frontal or coronal--Divides the body into anterior or ventral and posterior or dorsal parts

C. Transverse--Divides the body into superior and inferior parts

IV. Body cavities (Transparency 4)

A. Dorsal

1. Cranial
2. Spinal

B. Ventral

1. Thoracic
2. Abdominal
3. Pelvic

V. Cavities containing body organs

A. Cranial

1. Brain
2. Pituitary gland

B. Spinal--Spinal cord

C. Thoracic

1. Lungs
2. Heart
3. Thymus
4. Trachea
5. Bronchi
6. Esophagus

INFORMATION SHEET

D. Abdominal and pelvic (peritoneal)

1. Stomach
2. Liver
3. Gallbladder
4. Spleen
5. Pancreas
6. Small and large intestine
7. Ovaries
8. Fallopian tubes
9. Uterus
10. Kidneys
11. Ureters
12. Adrenal glands
13. Bladder

(NOTE: The kidneys, ureters, and adrenal glands are examples of *retro*peritoneal organs because they lie to the back of the abdominal cavity.)

VI. Abdominopelvic quadrants (Transparency 5)

A. Upper right quadrant

B. Upper left quadrant

C. Lower right quadrant

D. Lower left quadrant

VII. Abdominopelvic regions (Transparency 6)

A. Right hypochondrium

B. Epigastrium

C. Left hypochondrium

D. Right lumbar

INFORMATION SHEET

- E. Umbilical
- F. Left lumbar
- G. Right inguinal
- H. Suprapubic
- I. Left inguinal

VIII. Basic components of a cell (Transparency 7)

- A. Cell membrane--Outer cover that protects the cell
- B. Cytoplasm--Protoplasm of a cell outside the nucleus, which contains water, food particles, and other material used by cell to sustain life
- C. Nucleus--Center of cell that controls all activities, especially reproduction

IX. Physical exchanges that occur through cell membranes (Transparency 8)

- A. Diffusion--Constant movement of molecules from a region of high concentration to one of lower concentration

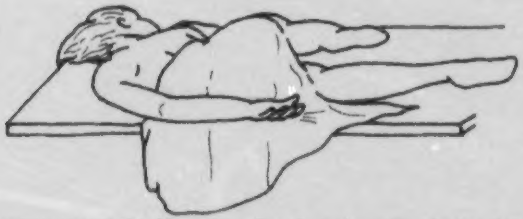
  (NOTE: A molecule is the smallest quantity into which a solution can be divided.)

- B. Osmosis--Diffusion of liquid through a semipermeable membrane, with the less concentrated solution going to the one that is more concentrated
- C. Filtration--Passage of liquid through a membrane allowing smaller particles to pass through as a result of a mechanical force on one side

X. Body positions used in the medical office (Job Sheet #1)

- A. Sims'

  (NOTE: Used for some rectal, prostatic and proctological exams.)

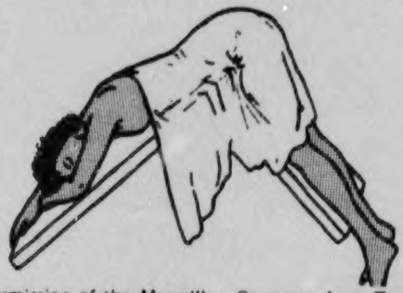


Adapted with permission of the Macmillan Company from *Textbook of the Principles and Practices of Nursing*, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

INFORMATION SHEET

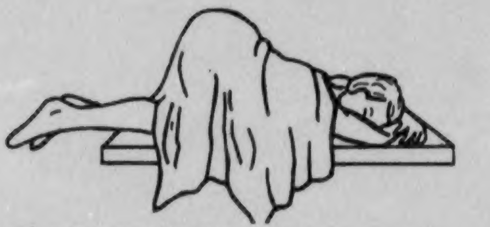
B. Jackknife

(NOTE: This position can be used if a "break exam table" is not available. It is used for most proctological exams because upper intestines fall forward and make examination of lower bowel easier.)



Adapted with permission of the Macmillan Company from ***Textbook of the Principles and Practices of Nursing***, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

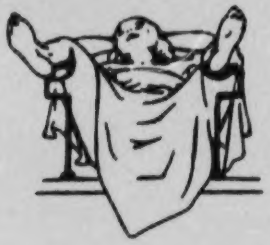
C. Knee-chest



Adapted with permission of the Macmillan Company from ***Textbook of the Principles and Practices of Nursing***, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

D. Lithotomy

(NOTE: This is basic position used for pelvic exam.)



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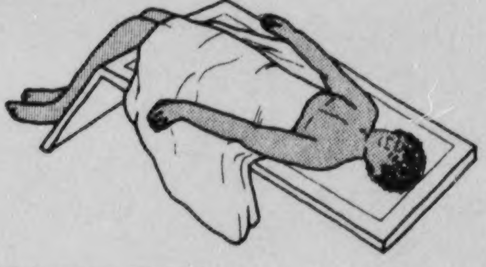
INFORMATION SHEET

E. Trendelenburg

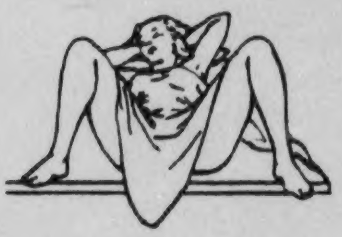
(NOTE: This position can be used when in x-ray for hiatal hernia.)



Adapted with permission of the Macmillan Company from *Textbook of the Principles and Practices of Nursing*, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

F. Dorsal recumbent

(NOTE: This position may be used for pelvic exam when stirrups are not available.)



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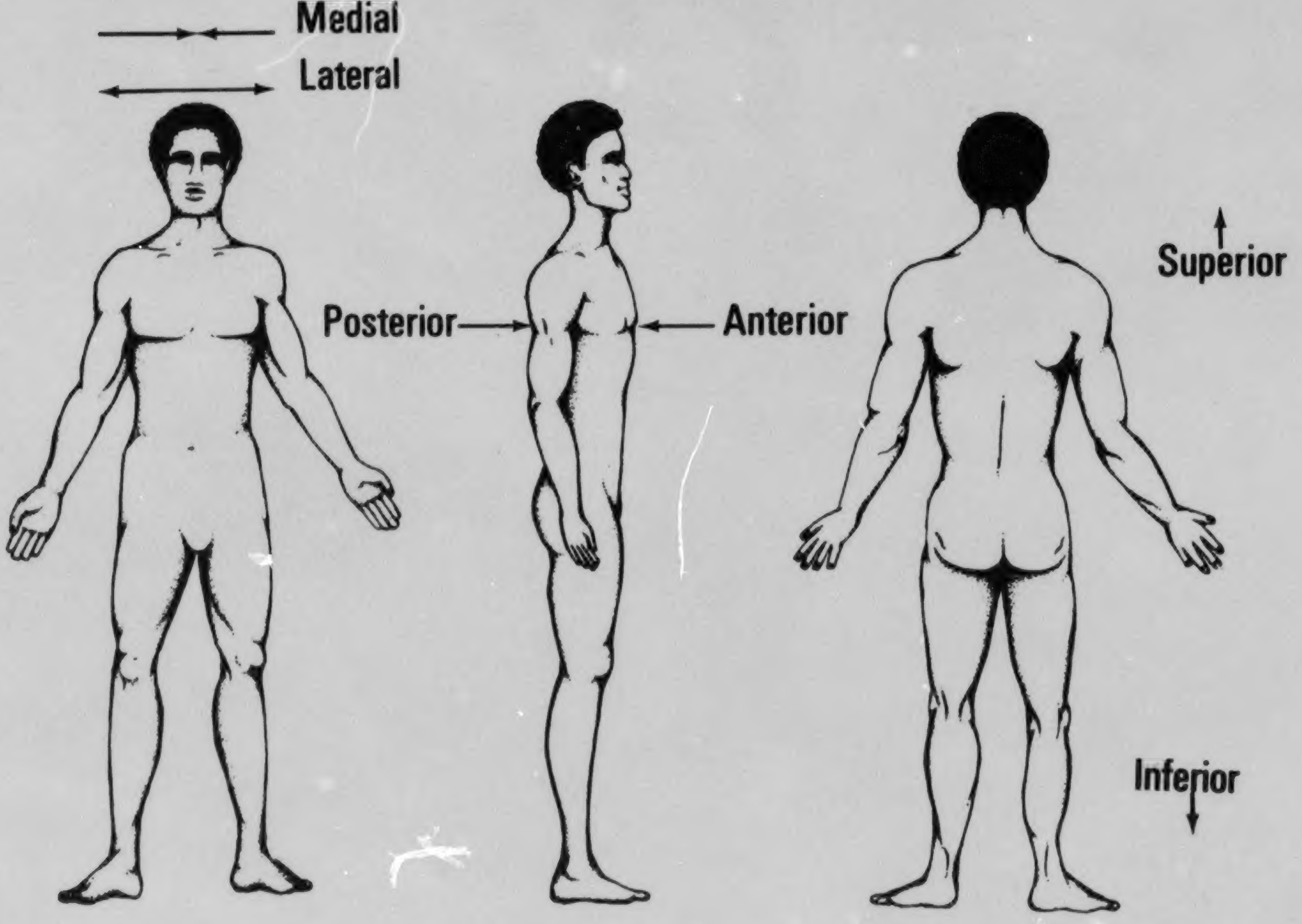
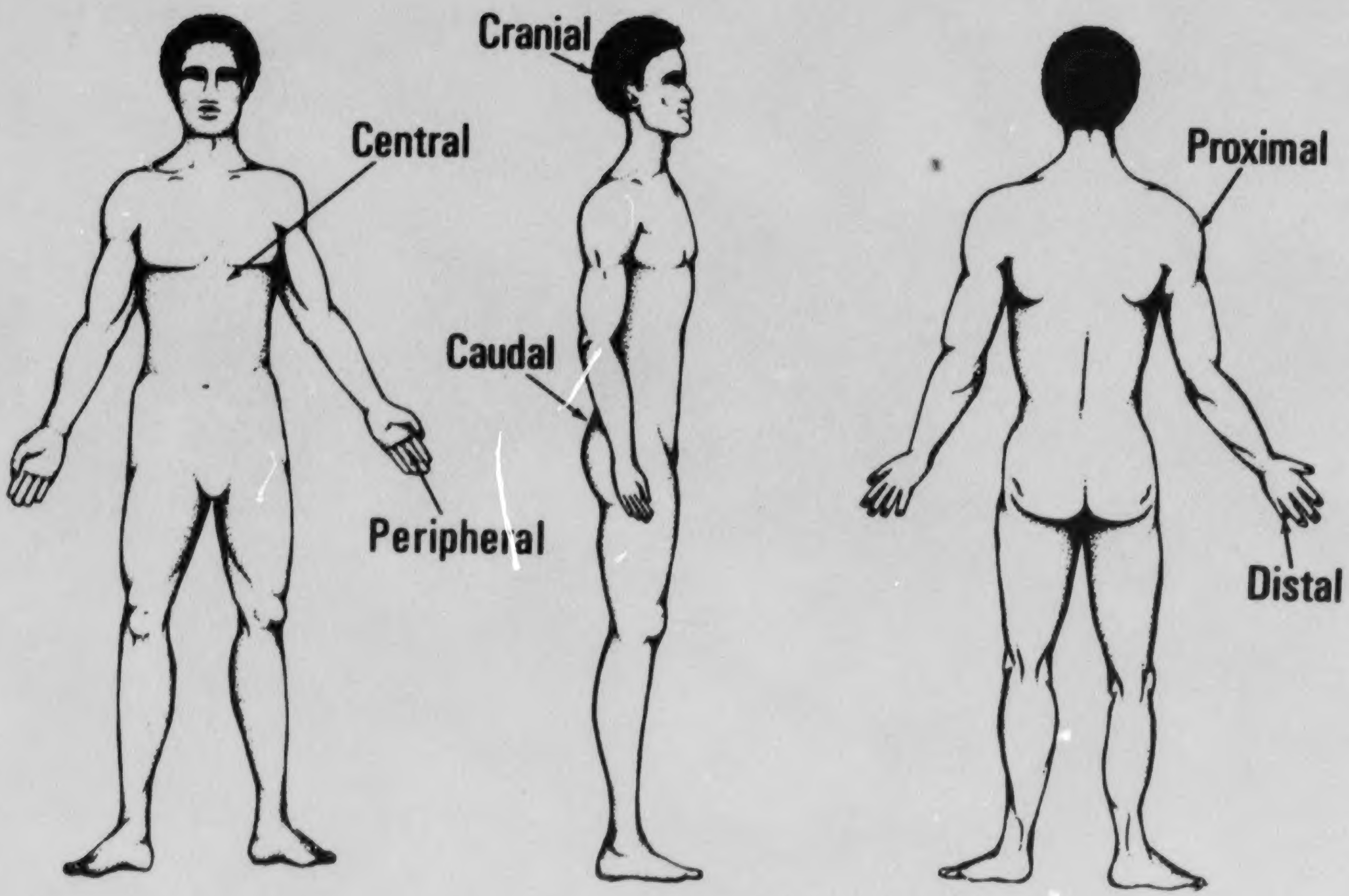
Directions


Medial
Lateral
Posterior
Anterior
Superior
Inferior

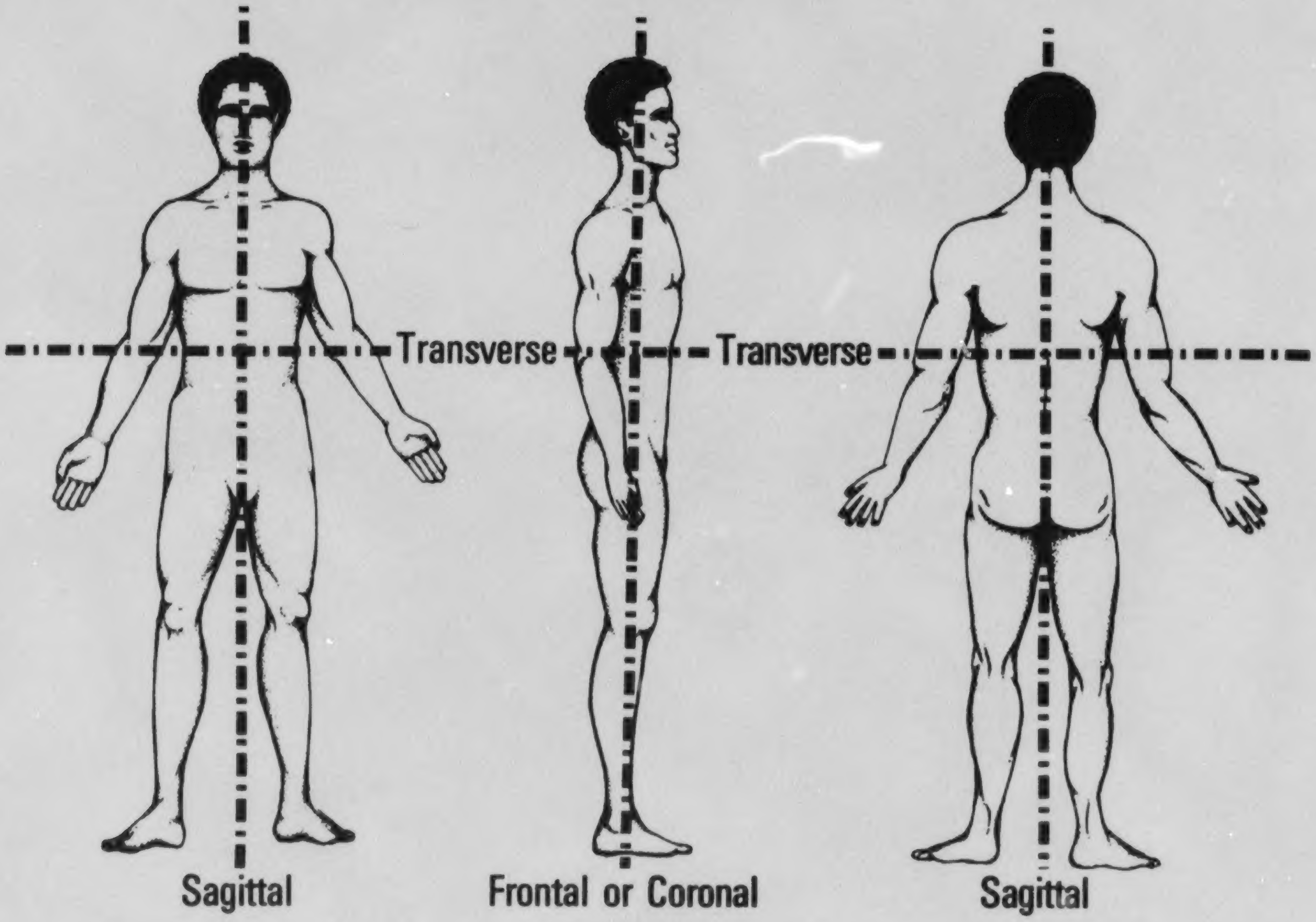
TM 1

MA - 11-B

Directions
(Continued)


Cranial
Central
Proximal
Caudal
Peripheral
Distal

Planes

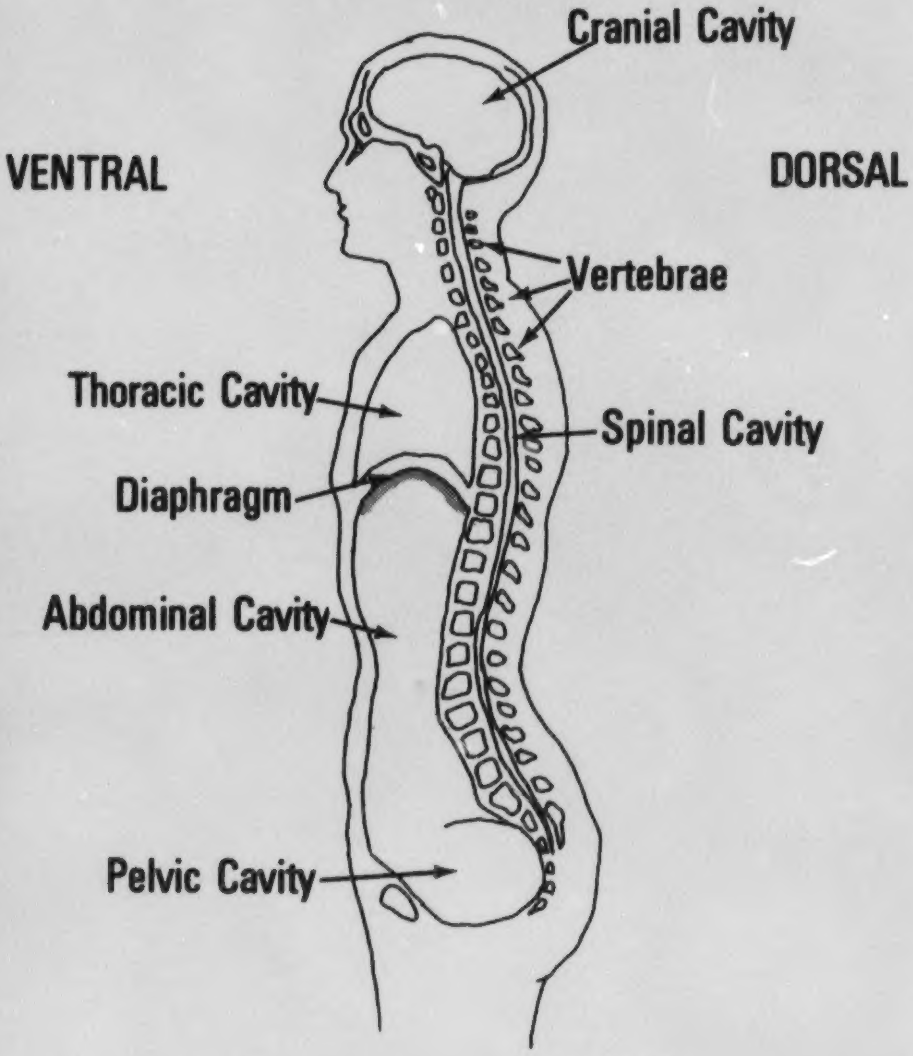

Transverse
Transverse
Sagittal
Frontal or Coronal
Sagittal

6

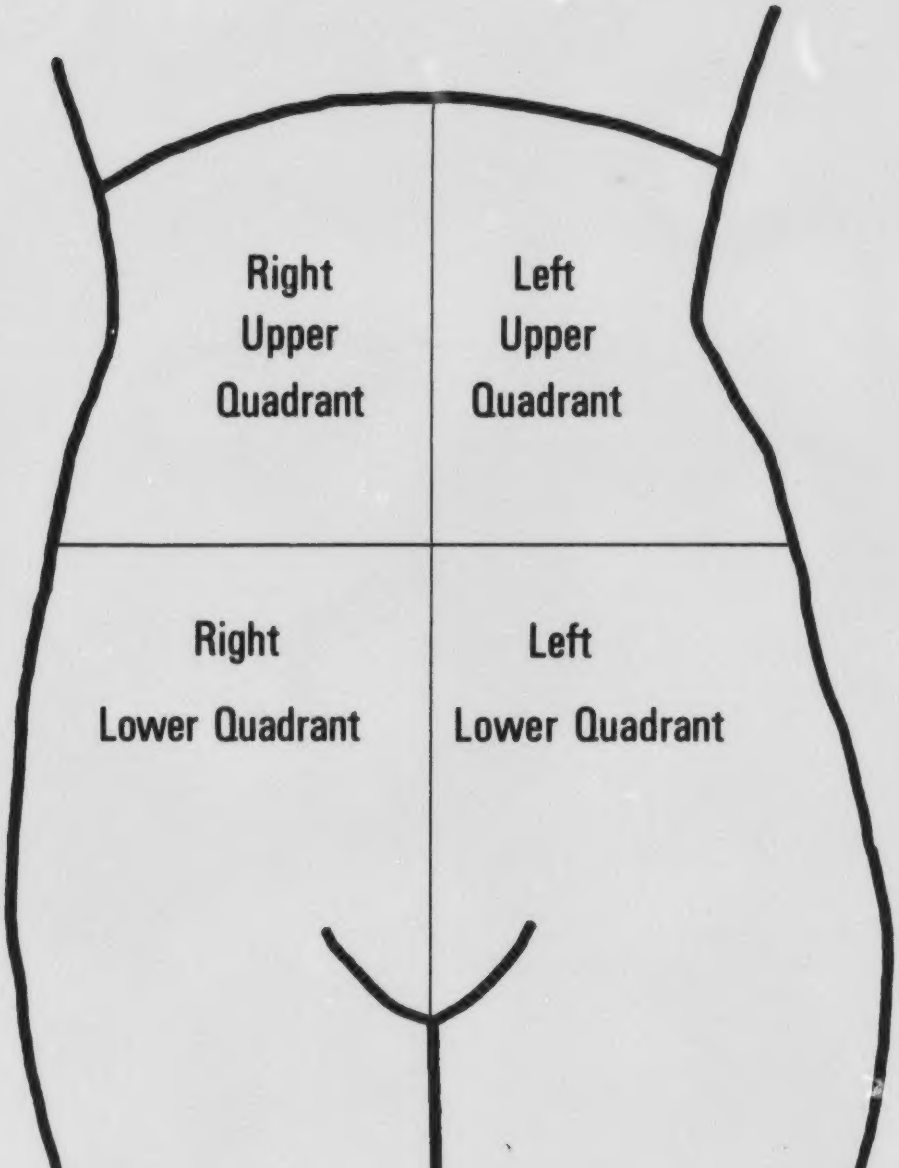
TM 3

MA - 15-B

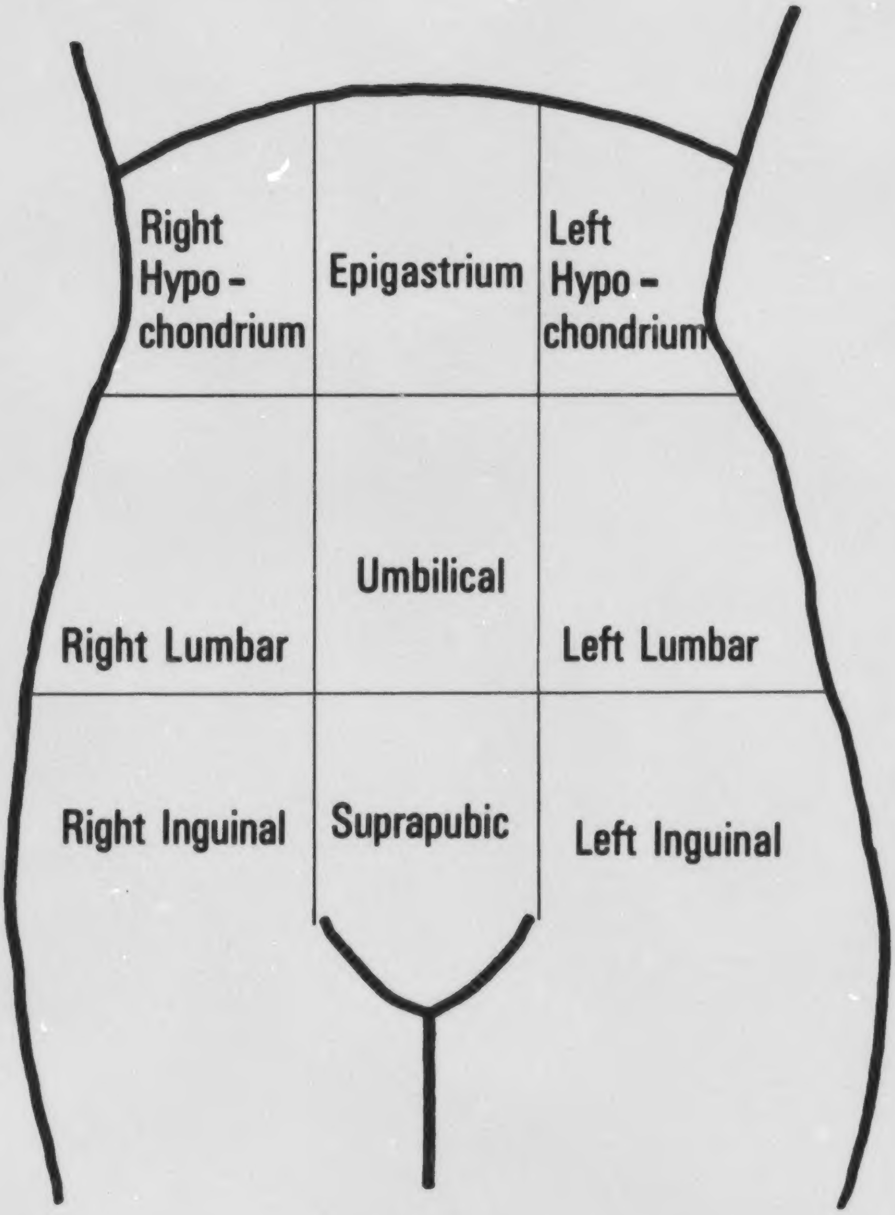
Body Cavities: Side View


Cranial Cavity
VENTRAL
DORSAL
Vertebrae
Thoracic Cavity
Spinal Cavity
Diaphragm
Abdominal Cavity
Pelvic Cavity

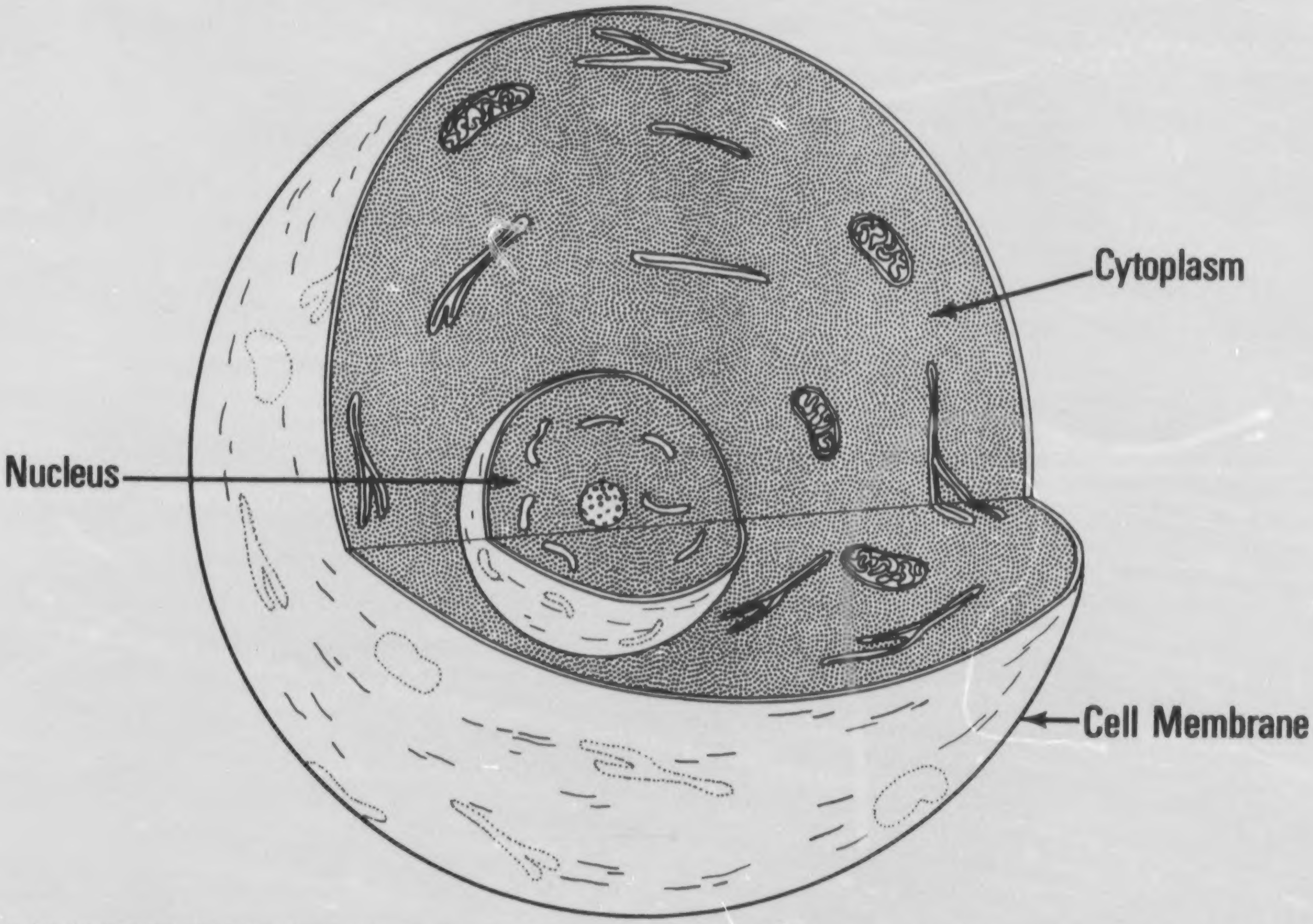
Quadrants of the Abdominopelvic Area


Right
Upper
Quadrant
Left
Upper
Quadrant
Right
Lower Quadrant
Left
Lower Quadrant

Regions of the Abdominopelvic Area


Right Hypo - chondrium
Epigastrium
Left Hypo - chondrium
Umbilical
Right Lumbar
Left Lumbar
Right Inguinal
Suprapubic
Left Inguinal

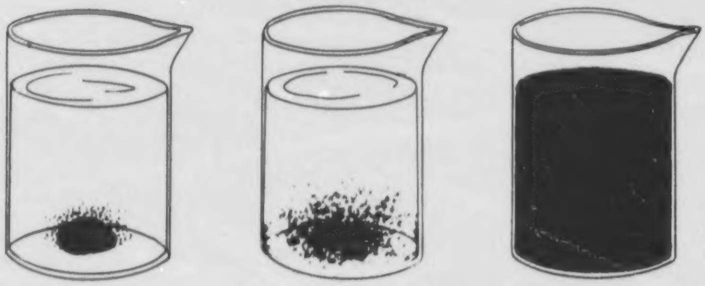
Basic Components of a Cell


Cytoplasm
Nucleus
Cell Membrane

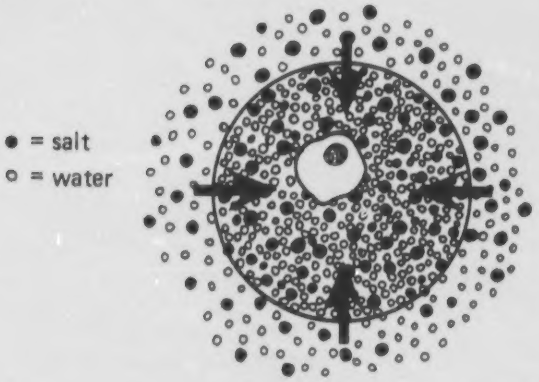
Redrawn after Anthony, Catherine Parker, and Alyn, Irene B.: *Structure and Function of the Body*, 5th ed., St. Louis, 1976, The C.V. Mosby Co.

Physical Transport Methods of Cells

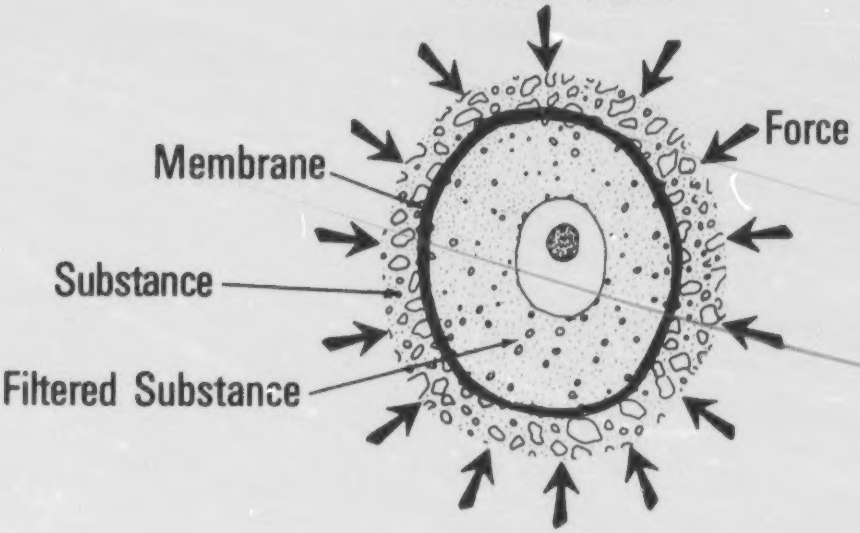
Diffusion



Osmosis



Filtration


Force
Membrane
Substance
Filtered Substance

BODY PLANES AND CAVITIES
UNIT I

JOB SHEET #1--DRAPE PATIENTS FOR COMMON DIAGNOSTIC PROCEDURES

I. Equipment

   A. Towels

   B. Sheets or paper drapes

   C. Gown

II. Procedure for lithotomy position

   A. Assist patient in gowning if needed

   B. Make sure patient has emptied bladder before exam

   C. Place patient in dorsal-recumbent position on exam table

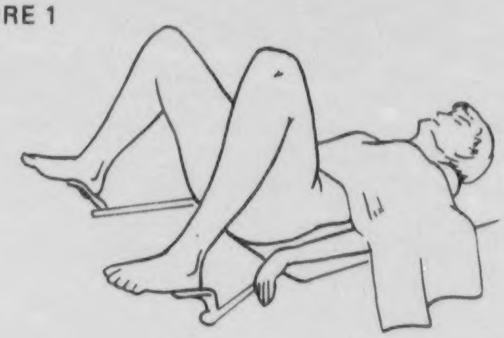
   D. Cover with paper drape, sheet, or towel according to physician's preference

   E. Ask patient to move towards end of exam table

   F. Place feet in stirrups (Figure 1)

   (NOTE: Some tables will have stirrups that fit under knees and calf. This position can be uncomfortable if assumed for long period of time. Make sure that exam will take place as soon as patient has been positioned.)

FIGURE 1



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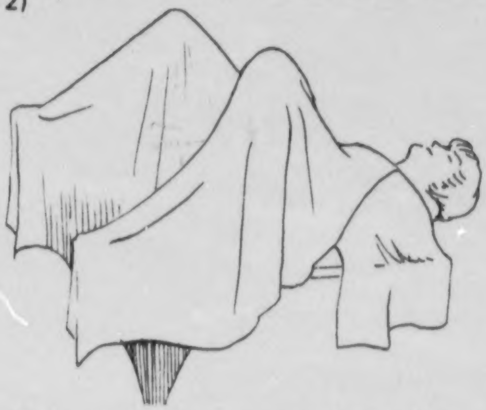
JOB SHEET #1

G. Turn sheet on the diagonal with one corner hanging loose over edge of table (Figure 2)

FIGURE 2



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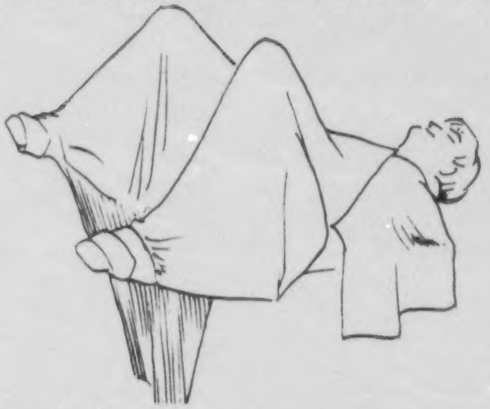
H. Wrap corners on each side around each foot in the stirrups (Figure 3)

FIGURE 3



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I. Fold back center corner to expose vulva for exam

(NOTE: Some physicians prefer the fenestrated or open drape to be placed over the vulva.)

III. Procedure for Sims' position

A. Assist patient in gowning if needed

B. Position patient on flat exam table with weight on left side and chest

C. Place left arm along the back

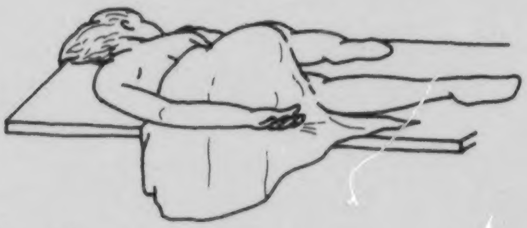
D. Instruct patient to move buttocks over to side of table

JOB SHEET #1

E. Instruct patient to pull right knee up close to chest

F. Place a sheet loosely over patient, covering chest and knees (Figure 4)

FIGURE 4



Adapted with permission of the Macmillan Company from *Textbook of the Principles and Practices of Nursing*, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

G. Fold back over to expose rectal area when physician is ready for exam

IV. Procedure for knee-chest position

A. Position patient flat on table resting on upper chest and knees

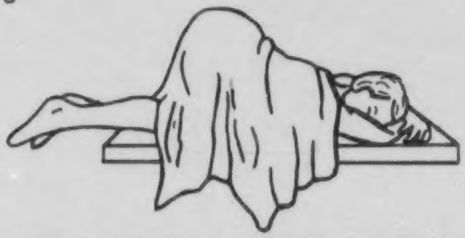
(NOTE: Prepare patient for this exam just before procedure takes place. Do not position patient and expect him or her to remain for a long period of time.)

B. Align knees positioned directly under buttocks so that thighs are vertical and buttocks are as high as possible

C. Make sure knees are slightly apart and patient has turned head to side

D. Place a sheet loosely over patient from shoulders to knees (Figure 5)

FIGURE 5



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BODY PLANES AND CAVITIES
UNIT I

TEST

NAME_______________________________________ SCORE____________

1. Match terms associated with body planes and cavities to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Groups of organs that carry out specific body functions

_____b. Specialized groups of cells that are specific to a function and form organs

_____c. Mass of protoplasm that when grouped together carries on all functions of the body; groups comprise tissues

_____d. Thin, pliable layer of tissue that lines a tube or cavity, covers an organ, or separates one organ from another

_____e. Tissues of a specific form that group together to form systems

_____f. Referring to the peritoneum, or the area that contains the abdominal organs

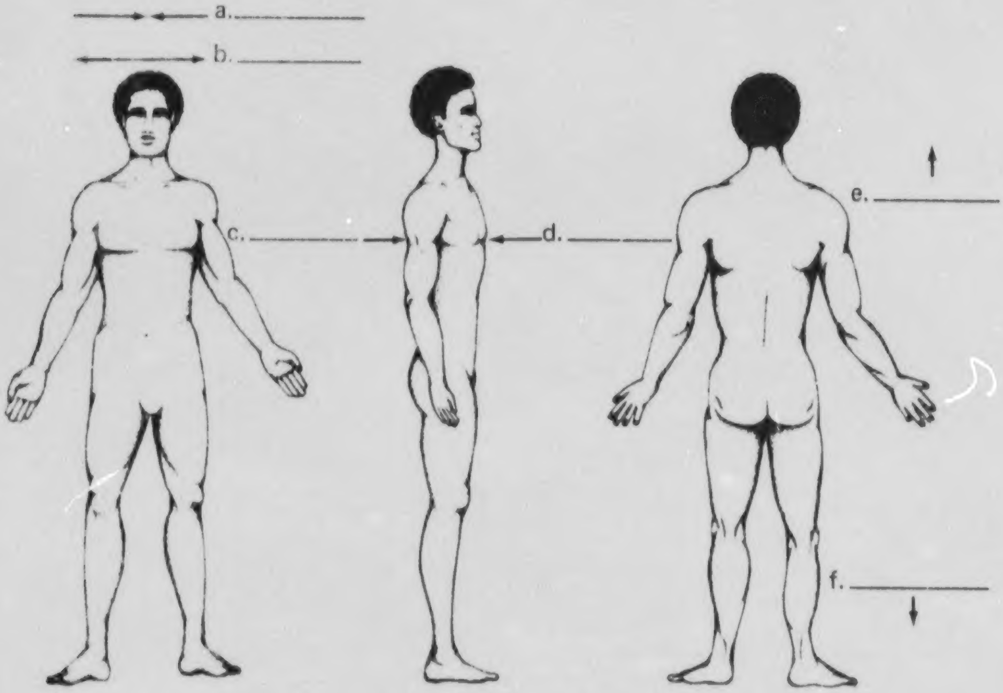
_____g. Located behind the peritoneum

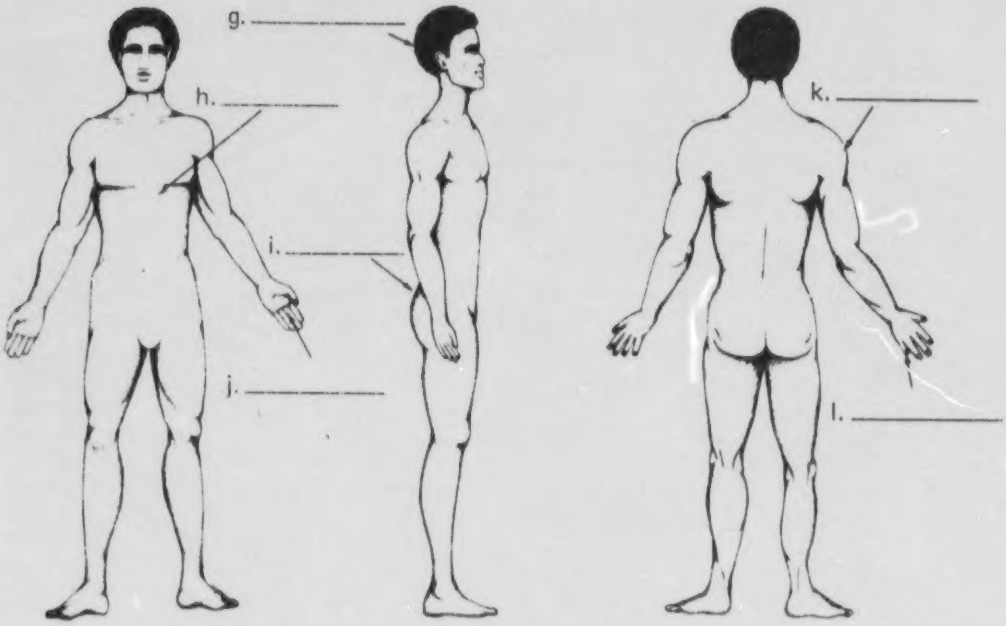
_____h. Sheets of serous membrane that line the abdominal walls

_____i. Thick substance which forms basis for all living activities

1. Systems
2. Cell
3. Organs
4. Membrane
5. Tissues
6. Retroperitoneal
7. Peritoneum
8. Peritoneal
9. Protoplasm

2. Label directional terms on the following diagrams. Write the correct terms in the blanks provided.





3. Match the anatomical planes of the body to the correct descriptions. Place the correct numbers in the blanks provided.

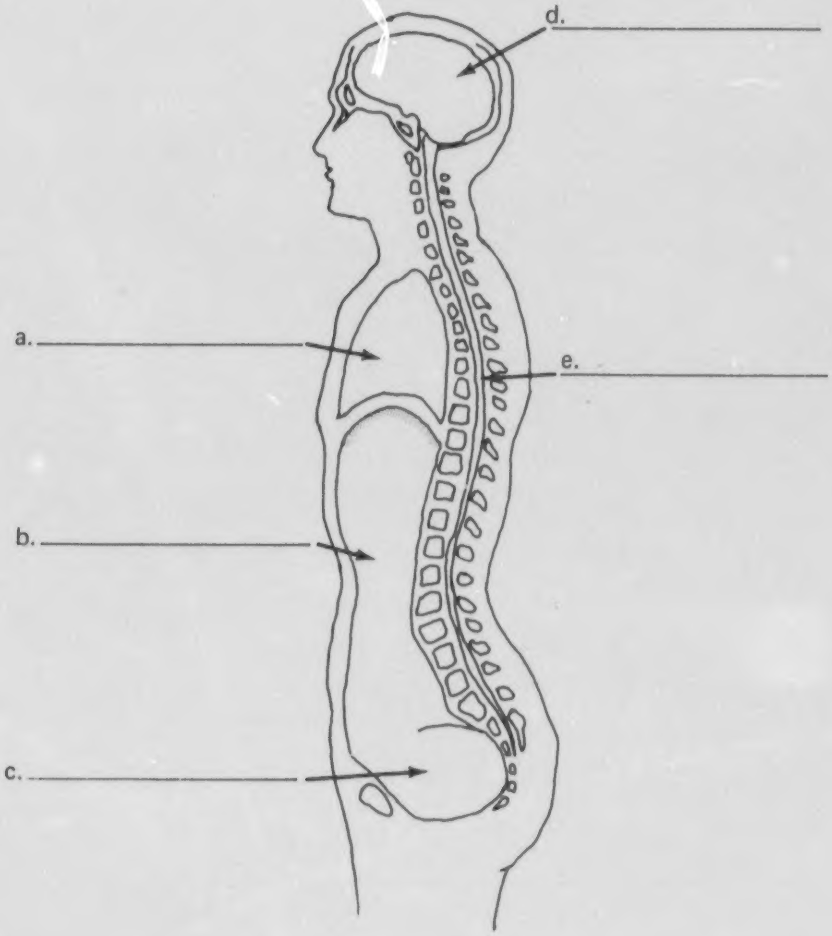
_____a. Divides the body into superior and inferior parts

_____b. Imaginary line from head to foot dividing the body into a right and left part

_____c. Divides the body into anterior or ventral and posterior or dorsal parts

1. Sagittal
2. Transverse
3. Frontal or coronal

4. Label body cavities on the following drawings. Write the correct names in the blanks provided.



5. **Distinguish between cavities containing body organs. Place a "C" for cranial, "S" for spinal, "T" for thoracic, and "A" for abdominal and pelvic in the correct blanks.**

_____a. Liver

_____b. Ureters

_____c. Pituitary gland

_____d. Pancreas

_____e. Stomach

_____f. Trachea

_____g. Ovaries

_____h. Heart

_____i. Spinal cord

_____j. Gallbladder

_____k. Brain

_____l. Thymus

_____m. Uterus

_____n. Kidneys

_____o. Bronchi

_____p. Adrenal glands

_____q. Lungs

_____r. Small and large intestine

_____s. Esophagus

_____t. Spleen

_____u. Fallopian tubes

_____v. Bladder

6. Name the abdominopelvic quadrants of the body.

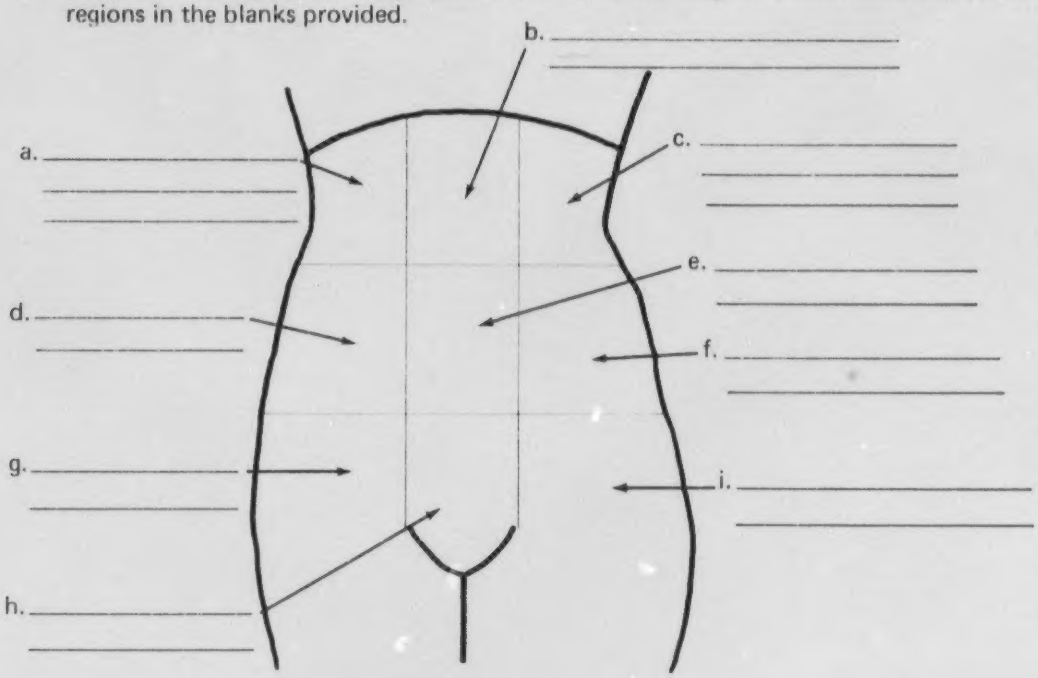
a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

7. Label the abdominopelvic regions of the body on the diagram below. Write the correct regions in the blanks provided.



8. Describe basic components of a cell.

a. Cell membrane--____________________

b. Cytoplasm--____________________

____

c. Nucleus--____________________

____

9. Match terms associated with the physical exchanges that occur through cell membranes to the correct definitions. Place the correct numbers in the blanks provided.

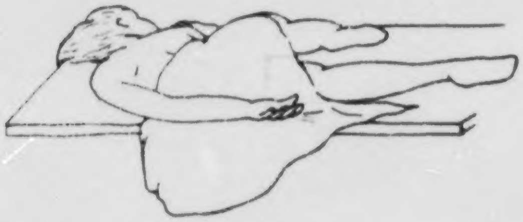
_____a. Diffusion of liquid through a semipermeable membrane, with the less concentrated solution going to the one that is more concentrated

_____b. Passage of liquid through a membrane allowing smaller particles to pass through as a result of a mechanical force on one side

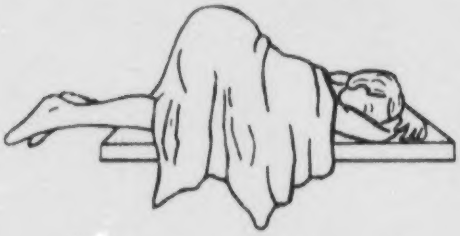
_____c. Constant movement of molecules from a region of high concentration to one of lower concentration

1. Filtration
2. Diffusion
3. Osmosis

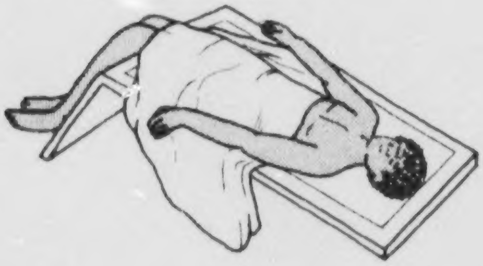
10. Label various body positions used in the medical office. Write the correct names in the blanks provided.



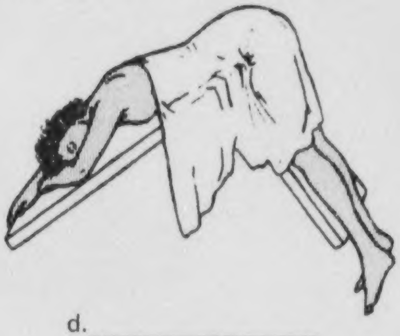
a.____________________



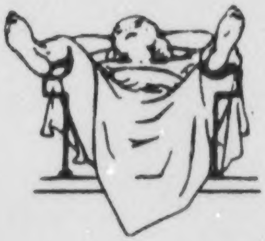
b.____________________



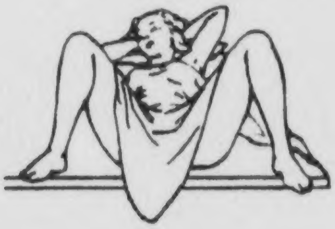
c.____________________



d.____________________



e.____________________



f.____________________

11. Demonstrate the ability to drape patients for common diagnostic procedures.

(NOTE: If the above activity has not been finished before the test, ask the instructor when it should be completed.)

BODY PLANES AND CAVITIES
UNIT I

ANSWERS TO TEST

1. a. 1
   b. 5
   c. 2
   d. 4
   e. 3
   f. 8
   g. 6
   h. 7
   i. 9

2. a. Medical
   b. Lateral
   c. Posterior
   d. Anterior
   e. Superior
   f. Inferior
   g. Cranial
   h. Central
   i. Caudal
   j. Peripheral
   k. Proximal
   l. Distal

3. a. 2
   b. 1
   c. 3

4. a. Thoracic
   b. Abdominal
   c. Pelvic
   d. Cranial
   e. Spinal

5. a. A
b. A
c. C
d. A
e. A
f. T
g. A
h. T
i. S
j. A
k. C
l. T
m. A
n. A
o. T
p. A
q. T
r. A
s. T
t. A
u. A
v. A

6. a. Upper right quadrant
b. Upper left quadrant
c. Lower right quadrant
d. Lower left quadrant

7. a. Right hypochondrium
   b. Epigastrium
   c. Left hypochondrium
   d. Right lumbar
   e. Umbilical
   f. Left lumbar
   g. Right inguinal
   h. Suprapubic
   i. Left inguinal

8. Descriptions should include:
   a. Outer cover that protects the cell
   b. Protoplasm of a cell outside the nucleus, which contains water, food particles, and other material used by cell to sustain life
   c. Center of cell that controls all activities, especially reproduction

9. a. 3
   b. 1
   c. 2

10. a. Sims'
    b. Knee-chest
    c. Trendelenburg
    d. Jackknife
    e. Lithotomy
    f. Dorsal recumbent

11. Performance skills evaluated to the satisfaction of the instructor

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of microbiology and bacteriology in the prevention of the spread of microorganisms, be able to assist in basic laboratory tests using the microscope, and prepare equipment by sterilization. The student should also be able to demonstrate the use of proper handwashing technique. This knowledge will be evidenced through completion of the assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with microbiology and bacteriology to the correct definitions.
2. Name vital functions of living organisms.
3. Select from a list factors influencing growth of microorganisms.
4. Match classes of microorganisms to the correct definitions.
5. Label parts of the microscope.
6. Match the parts of the microscope to the correct functions.
7. Label groups of bacteria.
8. Select from a list common diseases caused by protozoa.
9. Distinguish between common diseases caused by fungi.
10. Select from a list common diseases caused by viruses.
11. Name common diseases caused by rickettsiae.
12. Name parasitic worms (helminths) which may infect the human organism.
13. Name basic methods for prevention of spread of microorganisms.
14. Match terms associated with the control of microorganisms to the correct definitions.
15. Research community resources that protect against harmful microorganisms.

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

  A. Provide students with objective sheet.

  B. Provide students with information, assignment, and job sheets.

  C. Make transparencies.

  D. Discuss unit and specific objectives.

  E. Discuss information sheet.

  F. Provide students with additional resources to use in completing assignment sheet.

  G. Demonstrate and discuss procedures outlined in job sheets.

  H. Collect slides with different types of bacteria from hospital laboratories or physicians' offices to use in Job Sheet #3--"Use a Microscope."

  I. Take field trips to community agencies or facilities that deal with protection against disease-producing environments.

  Examples: Water treatment department, city sanitation department, and county health department

  J. Invite a medical technologist to speak to class on the use of laboratory equipment and procedures or visit a hospital or clinic laboratory.

  K. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Protozoa

    2. TM 2--Fungi

    3. TM 3--Bacteria

4. TM 4--Rickettsiae and Viruses

5. TM 5--Metazoa

6. TM 6--Microscope

7. TM 7--Protozoan Infections

D. Assignment Sheet #1--Research Community Resources That Protect Against Harmful Microorganisms

E. Job sheets

1. Job Sheet #1--Use Proper Handwashing Technique

2. Job Sheet #2--Prepare a Temporary Slide

3. Job Sheet #3--Use a Microscope

4. Job Sheet #4--Wrap Packs for Sterilization

5. Job Sheet #5--Use an Autoclave

F. Test

G. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Cooper, Marian G., and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

C. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

D. Thomas, Clayton L. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

E. *Dorland's Illustrated Medical Dictionary.* 24th ed. Philadelphia: W.B. Saunders Company, 1965.

IV. Additional resources:

A. Film--"Handwashing in Patient Care." Color, 15 minutes, Oklahoma State Department of Health, 1968. Available from Oklahoma State Department of Health, Northeast 10th Street and Stonewall, Oklahoma City, Oklahoma 73105.

B. Filmstrip--"Infection Control Series." Available from Concept Media, P.O. Box 19542, Irvine California 92714.

C. Transparencies--"Disease and Health." Available from Milliken Publishers, 1100 Research Blvd., St. Louis, Missouri 63132.

(NOTE: This is a full color transparency booklet.)

D. Microscopes and slide sets--Available from National Teaching Aid Inc., 120 Fulton Ave., Garden City Park, New York 11040.

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

INFORMATION SHEET

I. Terms and definitions

  A. Aerobe--Microorganism that can live and grow only in the presence of oxygen

  B. Anaerobe--Microorganism that can live and grow only without oxygen

  C. Bacteriology--Study of bacteria

  D. Microbiology--Study of microorganisms

  E. Microorganism--Minute living body not visible to the naked eye

  F. Molds--Multicellular plants which grow rapidly under favorable conditions

  G. Parasite--Organism that lives within, upon, or at the expense of another living organism known as the host

  H. Saprophyte--Organism that lives upon the dead remains of plants and animals

  I. Ultraviolet rays--Rays which cause tanning of the skin, production of vitamin D, and destruction of some organisms

II. Vital functions of living organisms

(NOTE: Each individual microorganism is able to carry out some or all of the vital functions of living organisms.)

  A. Metabolism

  B. Growth

  C. Reproduction

  D. Irritability

  E. Motion

  F. Protection

III. Factors influencing growth of microorganisms

  A. Darkness

  (NOTE: Many microorganisms are very low forms of plant life which are colorless, contain no chlorophyll, and grow well in darkness. Many are killed by ultraviolet rays but are not affected by normal moderate light.)

INFORMATION SHEET

B. Temperature

(NOTE: Optimum temperature for most microorganisms ranges from that of a cool room to slightly above human body temperature.)

C. Moisture

(NOTE: All microorganisms require some moisture for growth.)

D. Food

(NOTE: Most of the organisms discussed in this unit contain no chlorophyll and cannot manufacture their own food from raw materials.)

E. Oxygen supply

(NOTE: Some microorganisms are aerobic; others are anaerobic.)

IV. Classes of microorganisms (Transparencies 1, 2, 3, 4, and 5)

A. Protozoa--Single-celled animals capable of movement by various means

(NOTE: Most protozoa are harmless to humans but some are pathogenic. These microorganisms are free-living forms, are able to move by themselves, and reproduce either asexually or sexually.)

B. Fungi--Low forms of plant life lacking chlorophyll

(NOTE: Most fungi live on dead or decaying organic material. Molds and yeasts serve many uses and those that cause disease in humans are microscopic.)

C. Bacteria--Single-celled organisms considered to be microscopic, colorless plants

(NOTE: Nonpathogenic bacteria aid in production of some foods, assist in decomposition of organic matter and are essential for life. Pathogenic bacteria cause many diseases.)

D. Rickettsiae--Organisms smaller than bacteria but larger than viruses, growing only within the cells of a living host

(NOTE: These microorganisms must live off of a host.)

E. Viruses--Organisms which cannot grow or reproduce until they have taken over a living cell

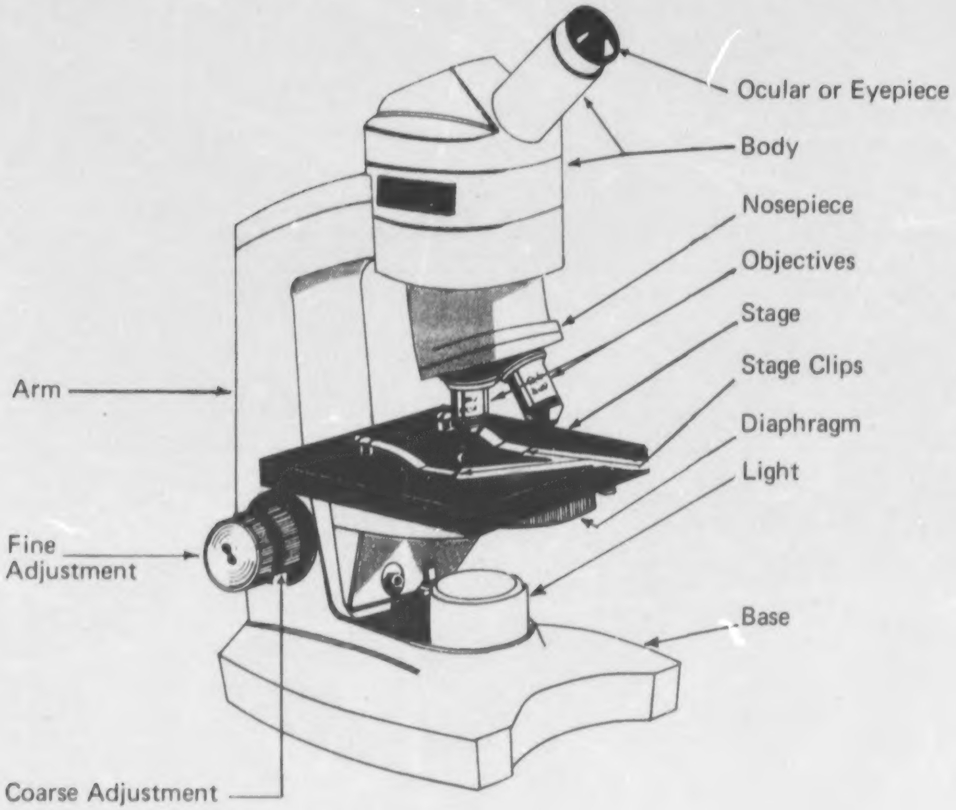
(NOTE: Viruses must be studied by direct observation with an electron microscope.)

F. Metazoa--Multicellular animals whose cells become differentiated to form tissues

Example: Helminths

INFORMATION SHEET

V. Parts of the microscope (Transparency 6)


Ocular or Eyepiece
Body
Nosepiece
Objectives
Stage
Stage Clips
Diaphragm
Light
Base
Arm
Fine Adjustment
Coarse Adjustment

Used with permission of American Optical Company.

(NOTE: This is only one type of scope that is used for diagnostic tests. Use the instructions given by the manufacturer for the one that you will be using.)

VI. Functions of parts of the microscope

A. Ocular or eyepiece--Contains two lenses to magnify the specimen

(NOTE: Usually the ocular magnifies 10 power but it may also be 5 or 15 power.)

B. Body--Holds the lenses at the top and bottom of the microscope at the correct working distance from each other

(NOTE: The body can be moved up and down from the specimen in order to focus the lenses on the specimen.)

INFORMATION SHEET

C. Nosepiece--Carries the lower lenses

(NOTE: The nosepiece moves so that either the low or high power lens can be put into place over the specimen.)

D. Objectives--High power and low power and some carry the oil immersion lens

(NOTE: When the objective [lens] is placed over a specimen it will produce an image that can be viewed at the ocular at the top of the microscope. The high power magnifies 43 times, the lower power 10 times and the oil immersion 100 times.)

E. Stage--Supports the specimen over a hole that admits light from the mirror or fixed light from below

F. Stage clips--Hold the slide in place

G. Diaphragm--Regulates the amount of light passing through the specimen

(NOTE: The diaphragm usually consists of a rotating disc containing holes ranging from small to large.)

H. Light--Transmits light through the hole to light the specimen

(NOTE: Some microscopes have a mirror which reflects light from a light source.)

I. Base--Firm support bearing the weight of the microscope

(CAUTION: The microscope is a very fragile instrument. Whenever you carry it, place one hand under the base while the other hand holds on to the arm.)

J. Arm--Supports the body and is used to carry the scope

K. Coarse adjustment--Moves the body tube up and down from the specimen

(CAUTION: Move the body tube very slowly to prevent breaking a slide.)

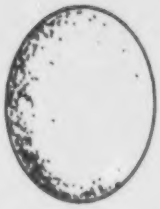
L. Fine adjustment--Permits exact focusing by moving the stage or body up or down very slightly

(NOTE: The fine adjustment should be used only after the specimen has been brought into view with the coarse adjustment.)

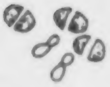
INFORMATION SHEET

VII. Groups of bacteria

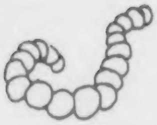
A. Cocci



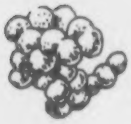
Examples:



Diplococci
(in pairs)

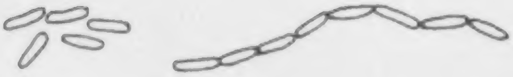


Streptococci
(in chains)



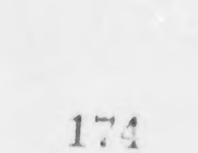
Staphylococci
(in clusters)

B. Bacilli



(NOTE: There are many different forms of bacilli, some with rounded edges, concave edges, or pointed edges.)

C. Spirilla



INFORMATION SHEET

VIII. Common diseases caused by protozoa (Transparency 7)

(NOTE: Diseases caused by protozoa are sometimes transmitted by insects.)

- A. Amebic dysentery
- B. Malaria
- C. Trichomonas

IX. Common diseases caused by fungi (Transparency 7)

- A. Molds
    - 1. Ringworm

      Examples: Tinea capitis (scalp), tinea corporis (body) and tinea barbae (beard)
    - 2. Athlete's foot

      (NOTE: This is also known as tinea pedis.)
- B. Yeasts
    - 1. Thrush
    - 2. Monilial vaginitis

X. Common diseases caused by viruses

- A. Smallpox (variola)
- B. Chickenpox (varicella)
- C. Measles (rubeola)
- D. German measles (rubella)
- E. Influenza
- F. Mumps (epidemic parotitis)
- G. Common cold (coryza)
- H. Fever blisters (herpes simplex)
- I. Shingles (herpes zoster)
- J. Rabies

INFORMATION SHEET

XI. Common diseases caused by rickettsiae

- A. Rocky Mountain spotted fever

  (NOTE: This is spread by wood ticks in various areas over the United States.)

- B. Typhus
- C. Q fever

XII. Parasitic worms (helminths) which may infect the human organism (Transparency 5)

- A. Roundworm
- B. Pinworm
- C. Hookworm
- D. Trichinella
- E. Flatworm

XIII. Basic methods for prevention of spread of microorganisms (Assignment Sheet #1)

- A. Wash hands

  (NOTE: This is one of the best methods to prevent the spread of infectious germs from patient to patient, worker to worker, and patient to worker.)

- B. Cover face when coughing or sneezing
- C. Keep medical instruments totally free from microorganisms

XIV. Terms associated with control of microorganisms

- A. Disinfection--Process of killing or stopping the growth of most microorganisms

  (NOTE: This level of control has limitations because some organisms are resistant to heat or chemicals.)

  Examples: Boiling water, flowing steam, and chemical germicides

- B. Sterilization--Process of killing all microorganisms, including spores

  Examples: Autoclaving, dry heat, ethylene oxide gas

  (NOTE: Because of advances in technology, sterile disposable packs of almost all equipment have been manufactured. Some offices still use a type of sterilization procedure for equipment that is permanent and will be reused.)

INFORMATION SHEET

C. Sanitation--Process of washing, scrubbing, and rinsing to clean equipment before sterilization

D. Germicide--Substance capable of destroying germs

E. Fungicide--Substance that can destroy fungi

F. Bactericide--Substance that can destroy bacteria

G. Antiseptic--Substance that can prevent growth or action of organisms without killing them

H. Bacteriostasis--Condition in which the growth of bacteria has been stopped but under the right circumstances could begin growing again

I. Aseptic--Free from disease-producing organisms

J. Septic--Contaminated with disease-producing organisms

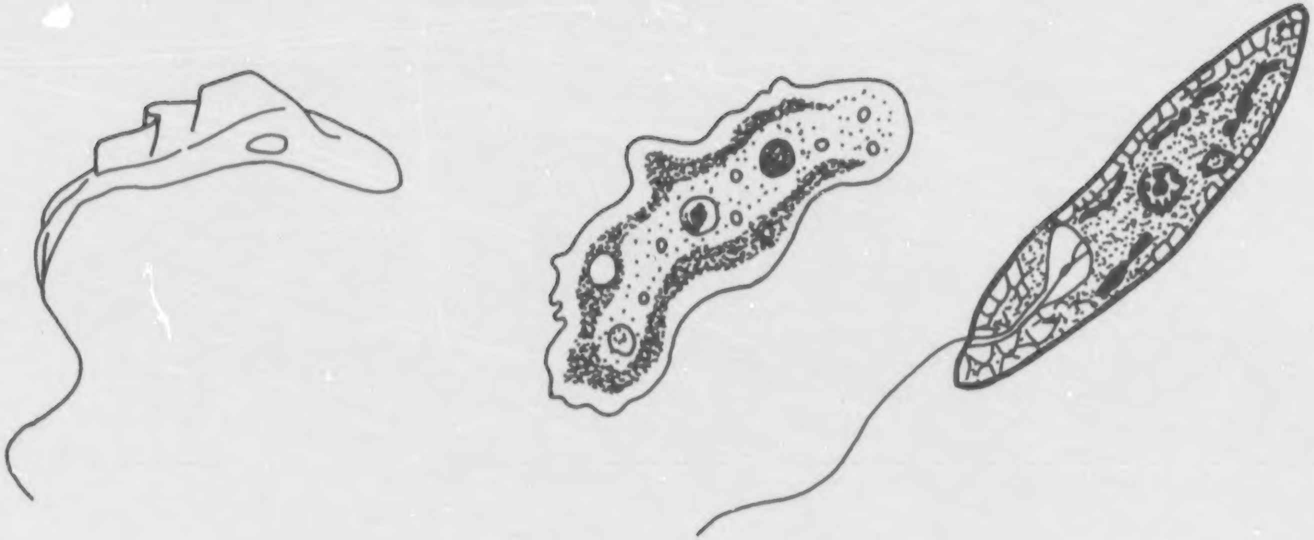
K. Contamination--Infection by contact with disease-producing organisms

L. Decontamination--Removal of most of the disease-producing organisms

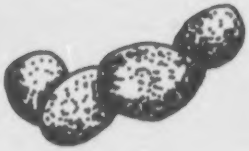
M. Cold sterilization--Immersion of equipment in a chemical solution of high germicidal potency

(NOTE: Instruments must be cleaned first, then placed in a special airtight cover, then covered with solution. They are left for a specific amount of time depending on the chemical used.)

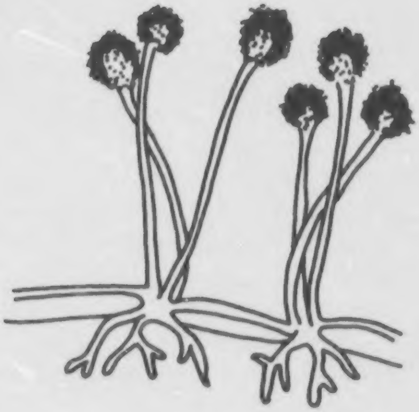
Protozoa



Fungi

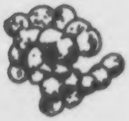


Yeast Cells

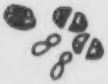


Molds

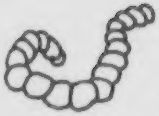
Bacteria



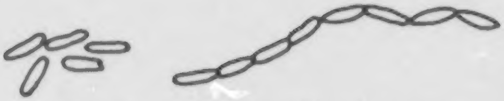
Staphylococci



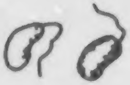
Diplococci



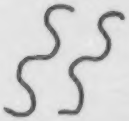
Streptococci



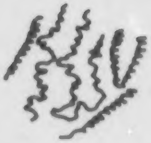
Bacilli (in Chains)



Vibrios



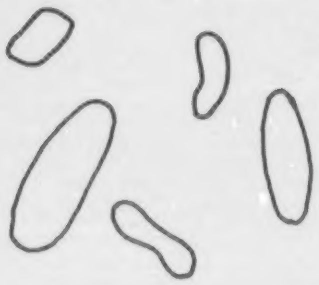
Spirilla



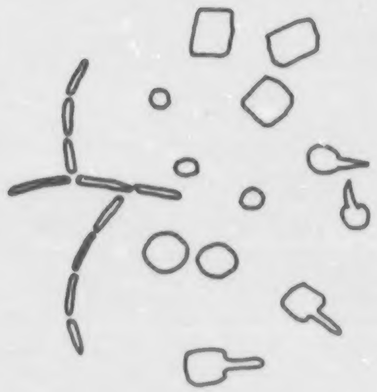
Spirochetes

Rickettsiae and Viruses

(As Seen Under an Electron Microscope)



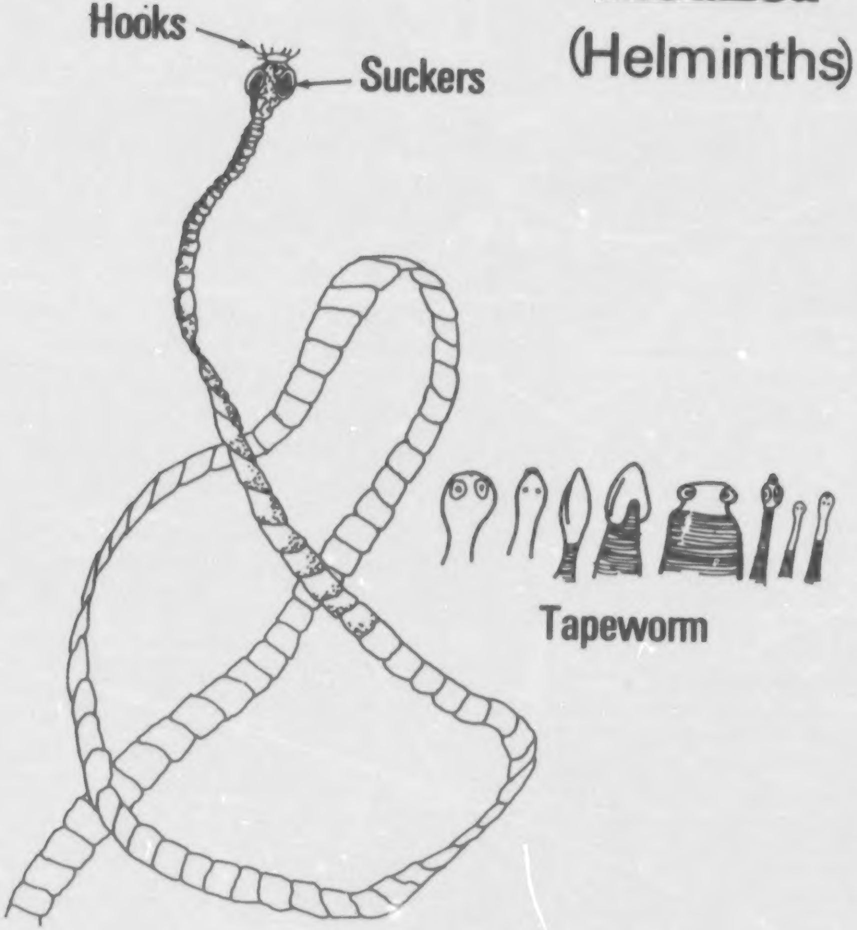
Rickettsiae



Viruses

Metazoa

(Helminths)


Hooks
Suckers

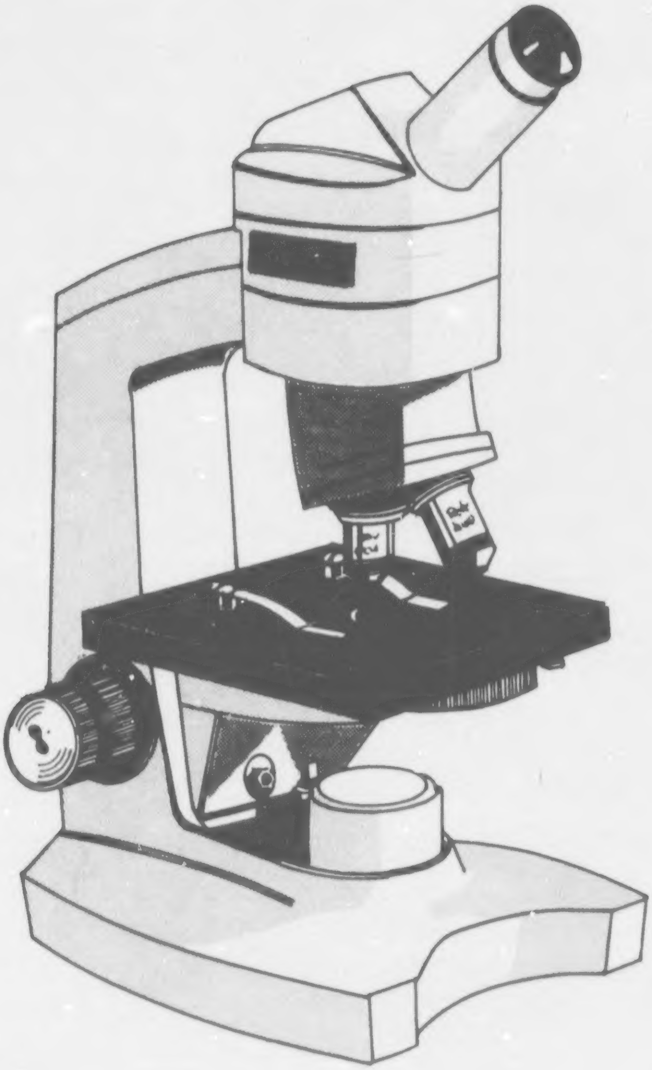
Tapeworm

Roundworm

Pinworm

Hookworm

Microscope



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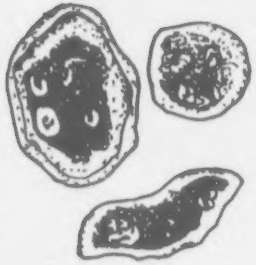
Protozoan Infections



Amebic Dysentery
(Entamoeba Histolytica)

Malaria
(Plasmodium Vivax)

Trichomonas Vaginalis

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

ASSIGNMENT SHEET #1--RESEARCH COMMUNITY RESOURCES THAT PROTECT AGAINST HARMFUL MICROORGANISMS

NAME ______________________________ SCORE ____________________

Each community must take definite measures to protect citizens from harmful diseases caused by microorganisms out of control. Locate in your city agencies or organizations that are responsible for enforcing laws or carrying out procedures that protect your environment. Report back to your class your findings, including the name of the agencies, their function, who funds their operations, and a list of specific tasks that help protect the community. Suggestions include the Department of Health, County Health Department, Sanitation Department, Environmental Protection Agency, Food and Drug Administration, and the Animal Welfare Department.

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

JOB SHEET #1--USE PROPER HANDWASHING TECHNIQUE

I. Equipment

   A. Soap

   (NOTE: It is best to use a mechanical soap dispenser if available.)

   B. Paper towels

   C. Running water

   D. Hand brush if needed

   E. Waste receptacle

II. Procedure

   A. Turn on water and regulate temperature

      1. When using foot-controlled faucets, turn water on when needed

      2. When using hand-controlled faucets, leave water running throughout procedure

   B. Apply soap to cover entire area of hands and wrists

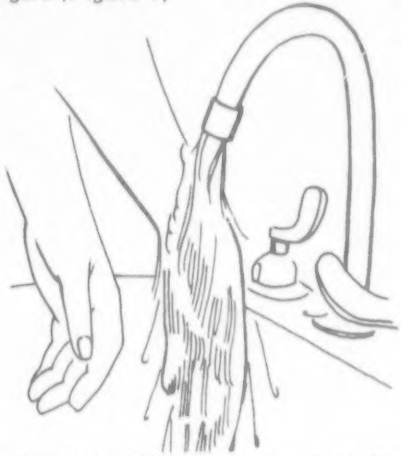
   C. Add water as necessary to keep lather moist

   D. Continue washing hands and use friction for thirty seconds to two minutes

   E. Use hand brush and clean nails if needed

   F. Rinse hands and wrists thoroughly with water flow directed from wrists down to fingers (Figure 1)

FIGURE 1



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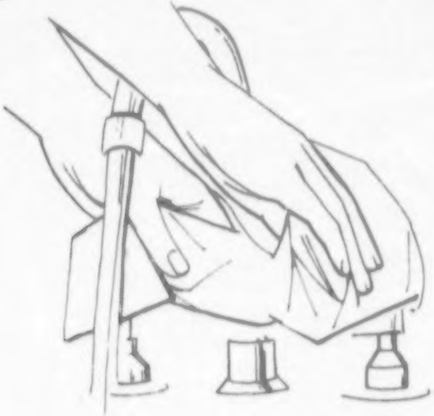
JOB SHEET #1

G. Soap hands again and rinse well

H. Dry hands well

I. Turn off faucets with paper towel, if hand controlled (Figure 2)

FIGURE 2



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J. Discard towel in proper waste receptacle

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

JOB SHEET #2--PREPARE A TEMPORARY SLIDE

I. Equipment

A. Blank slide and cover glass

B. Water and dropper

C. Small newsprint

D. Scissors

II. Procedure

A. Cut a single "e" from the smallest newsprint available

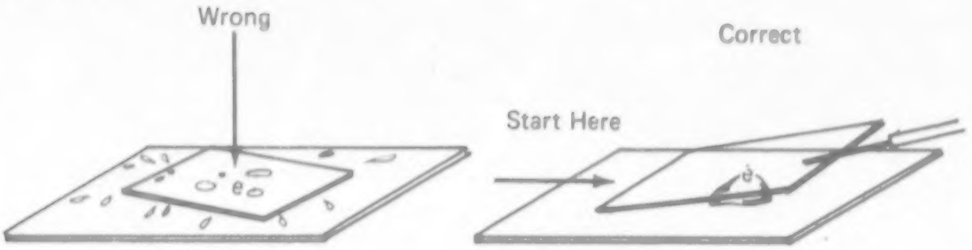
B. Place the "e" right side up on the slide

C. Add one drop of water on the top of the "e"

D. Slide the cover glass at an angle from the left side of the slide until it touches the water, then gently lower it (Figure 1)

(NOTE: Air trapped under the cover glass will interfere with what you see. Therefore, lower the glass slowly at an angle to push the air out the side. What you have just prepared is called a wet mount.)

FIGURE 1



MICROBIOLOGY AND BACTERIOLOGY
UNIT II

JOB SHEET #3--USE A MICROSCOPE

I. Equipment

A. Microscope

B. Lens paper or clean soft cloth

C. Prepared slide

II. Procedure

A. Prepare the microscope

(NOTE: If you need to move the microscope to the work area, carefully carry the microscope using both hands, with one hand under the base and the other on the arm.)

1. Set the microscope in front of you with the arm toward you

2. Clean the lenses with lens paper or a clean soft cloth

3. Turn the low power objective into place

(NOTE: When it is in proper position, it will click.)

4. Look through the eyepiece and turn the mirror toward a source of light

(NOTE: Never turn the mirror directly toward the sun.)

5. Adjust the mirror until a uniform circle of shadowless light appears

B. Adjust and use the microscope

1. Place the prepared slide over the hole in the stage and center it over the opening

2. Position the two stage clips to keep the slide from moving

(NOTE: If you are using a wet mount, do not tilt the arm of the microscope.)

3. Looking at the low power objective *from the side*, turn the coarse adjustment knob to lower the objective as low as possible

4. Look into the eyepiece and slowly turn the coarse adjustment to raise the tube until the object on the slide comes into focus

(NOTE: Always focus with the coarse adjustment knob by *raising* the body tube.)

JOB SHEET #3

5. Finish focusing by turning the fine adjustment

   (NOTE: As you examine the slide, turn the fine adjustment slowly back and forth not more than one-half of a turn. This brings out the details at different levels of the object.)

6. Clean and dry the slides
7. Clean and dry the stage
8. Clean the lenses with lens paper
9. Return the objective to low power
10. Turn the tube down near the stage, using coarse adjustment
11. Cover the microscope
12. Return the microscope to its proper storage location

    (NOTE: Remember to use both hands while carrying it.)

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

JOB SHEET #4--WRAP PACKS FOR STERILIZATION

(NOTE: Even with modern presterilized disposable packs there are times in the medical office when instruments and other equipment that will be used again need to be sterilized. Many types of autoclaves are available and you will need to follow manufacturer's instructions on special packing instructions.)

I. Equipment

   A. Wrappings

      (NOTE: Different types of wrappings are available, including layers of muslin, special types of paper, envelopes, bags or tubing that are porous enough to permit steam to flow through easily.)

   B. Autoclave

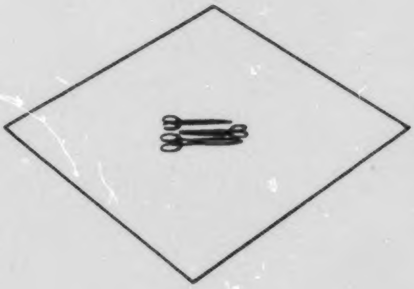
   C. Ties, tape, or other indicators that show sterilization has taken place

II. Procedure

   A. Place instrument or equipment in center of material (Figure 1)

      (NOTE: The pack should have just the items that will be used at one time. When a pack is opened all items should be used or sent back to be resterilized.)

FIGURE 1



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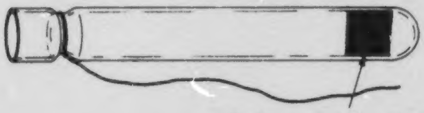
JOB SHEET #4

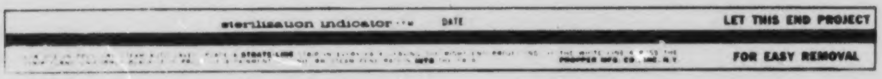
B. Place indicators in the interior of each package at this time

(NOTE: Many types of indicators are available. Use recommended type for your particular autoclave. See Figure 2)

FIGURE 2



Pellets in Glass Tube


sterilisation indicator
DATE
LET THIS END PROJECT
PROPPER MFG. CO. INC. N.Y.
FOR EASY REMOVAL

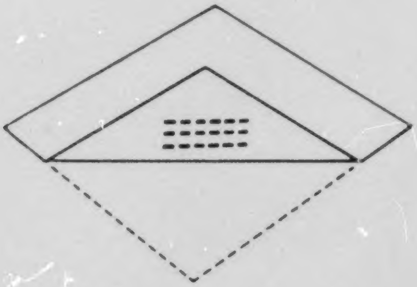
Indicator Strips

Used with permission of Propper Manufacturing Company.

C. Fold material up from the bottom (Figure 3)

(NOTE: Make sure that equipment is not piled in pack and does not touch. Instruments with moving parts should be opened and tubing should be free from kinks.)

FIGURE 3



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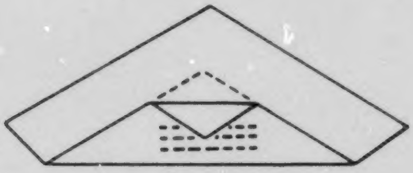
JOB SHEET #4

D. Leave a small corner doubled back (Figure 4)

FIGURE 4



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E. Fold the right and then the left sides, making sure that corners are folded back on each side (Figures 5 and 6)

FIGURE 5

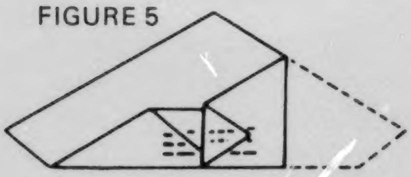
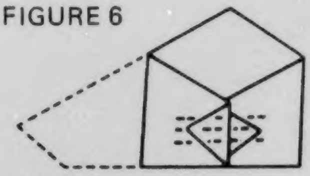


FIGURE 6



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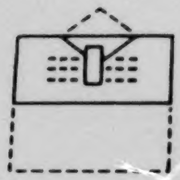
(NOTE: Equipment should be completely covered and corners and ends should be closed. Wrappings should not be so tight that the heat cannot penetrate easily.)

F. Fold pack up from the bottom and secure with special type of tape or ties (Figure 7)

FIGURE 7



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G. Date each pack and label as to its contents

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

JOB SHEET #5--USE AN AUTOCLAVE

(NOTE: A steam autoclave is used in this job sheet but there are many types of sterilizers available. Use manufacturer's instructions for the model you will be working with.)

I. Equipment

  A. Autoclave

  B. Water (distilled or demineralized)

II. Procedure

  A. Open safety door

  B. Fill reservoir with water

  (NOTE: Follow instructions on filling.)

  C. Load with specially wrapped packages, cans, jars, and basins

  (NOTE: Fill loosely with packages and allow room for steam to circulate. Cans, jars, and basins should be left open.)

  (CAUTION: Do not autoclave solutions along with other packages. Pressure released while temperature is above boiling point can cause solution to boil over.)

  D. Close and lock door

  E. Fill with water

  F. Set temperature adjustment and timer knobs

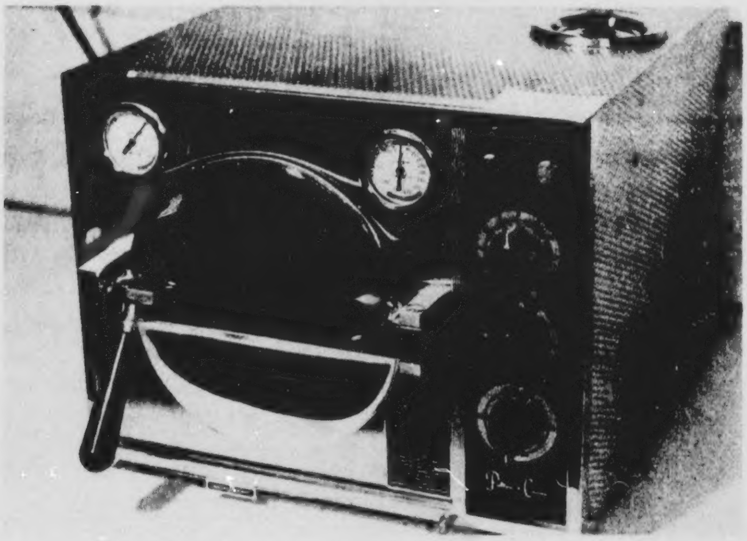
  (NOTE: For general sterilizing 121°C or 250°F is recommended. A table will be given with each machine recommending times for various items.)

JOB SHEET #5

G. Open autoclave after time specified is allowed (Figure 1)

(CAUTION Make sure that temperature dials are turned to "O" before opening.)

FIGURE 1



H. Allow load to cool

(NOTE: Larger packs may take 30 minutes or more.)

(CAUTION: Do not remove packs when wet.)

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

TEST

NAME ______________________________ SCORE ________________

1. Match terms associated with micorbiology and bacteriology to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Microorganism that can live and grow only in the presence of oxygen

_____b. Multicellular plants which grow rapidly under favorable conditions

_____c. Minute living body not visible to the naked eye

_____d. Organism that lives upon the dead remains of plants and animals

_____e. Rays which cause tanning of the skin, production of vitamin D, and destruction of some organisms

_____f. Microorganism that can live and grow only without oxygen

_____g. Study of microorganisms

_____h. Organism that lives within, upon, or at the expense of another living organism known as the host

_____i. Study of bacteria

1. Anaerobe
2. Microbiology
3. Saprophyte
4. Parasite
5. Aerobe
6. Ultraviolet rays
7. Molds
8. Bacteriology
9. Microorganism

2. Name vital functions of living organisms.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

3. Select from the list below factors influencing growth of microorganisms. Place an "X" in the correct blanks.

_____a. Temperature

_____b. Chlorophyll

_____c. Oxygen supply

_____d. Darkness

_____e. Noise

_____f. Moisture

_____g. Food

4. Match classes of microorganisms to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Multicellular animals whose cells become differentiated to form tissues

_____b. Low forms of plant life lacking chlorophyll

_____c. Organisms smaller than bacteria but larger than viruses, growing only within the cells of a living host

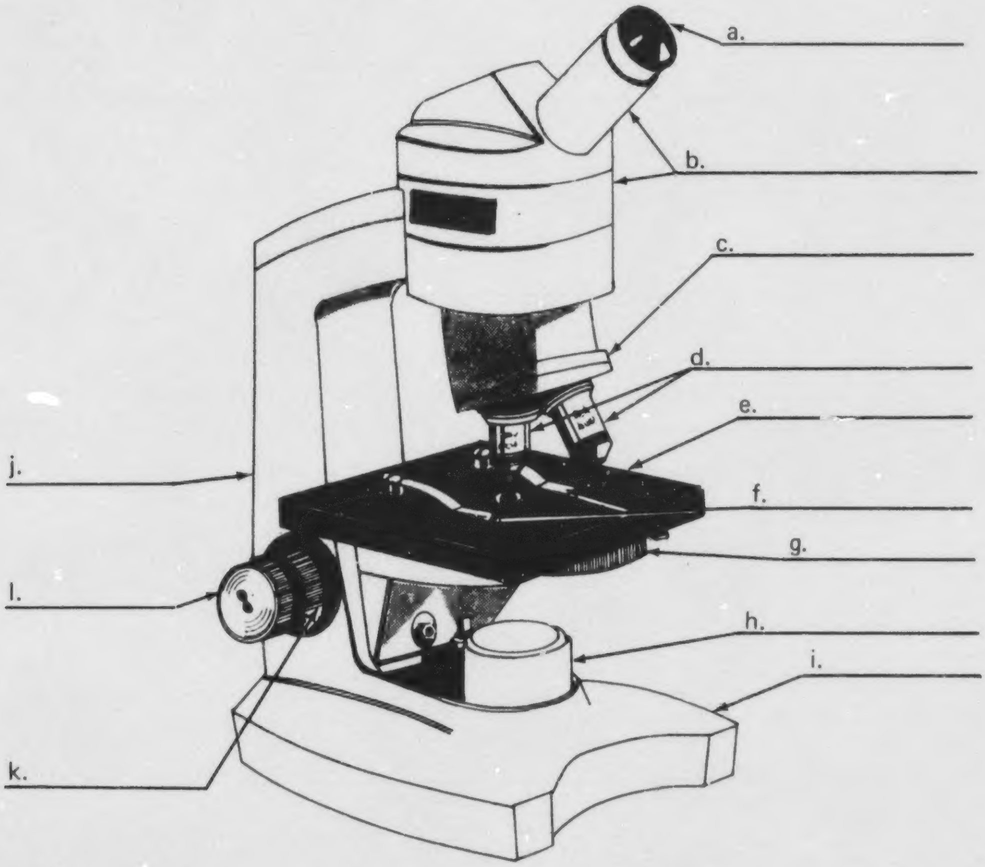
_____d. Single-celled animals capable of movement by various means

_____e. Single-celled organisms considered to be microscopic, colorless plants

_____f. Organisms which cannot grow or reproduce until they have taken over a living cell

1. Fungi
2. Metazoa
3. Bacteria
4. Protozoa
5. Rickettsiae
6. Viruses

5. Label the parts of the microscope. Write the correct names in the blanks provided.



6. Match the parts of the microscope to the correct functions. Place the correct numbers in the blanks provided.

_____a. Holds the lenses at the top and bottom of the microscope at the correct working distance from each other

_____b. Supports the specimen over a hole that admits light from the mirror or fixed light from below

_____c. Transmits light through the hole to light the specimen

_____d. Firm support bearing the weight of the microscope

_____e. Permits exact focusing by moving the stage or body up or down very slightly

1. Base
2. Fine adjustment
3. Light
4. Stage
5. Body

_____f. Supports the body and is used to carry the scope

_____g. Carries the lower lenses

_____h. High power and low power and some carry the oil immersion lens

_____i. Hold the slide in place

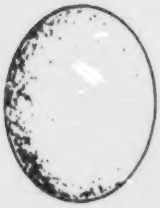
_____j. Regulates the amount of light passing through the specimen

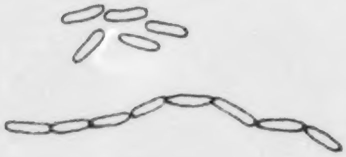
_____k. Moves the body tube up and down from the specimen

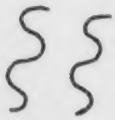
_____l. Contains two lenses to magnify the specimen

6. Diaphragm
7. Objectives
8. Stage clips
9. Coarse adjustment
10. Ocular or eyepiece
11. Arm
12. Nosepiece

7. Label groups of bacteria. Write the correct names in the blanks provided.







a. _______________ b. _______________ c. _______________

8. Select from the following list common diseases caused by protozoa. Place an "X" in the correct blanks.

_____a. Measles

_____b. Typhus

_____c. Malaria

_____d. Trichomonas

_____e. Rabies

_____f. Amebic dysentery

9. Distinguish between common diseases caused by fungi. Place an "M" before mold and a "Y" before yeasts in the correct blanks.

______a. Monilial vaginitis

______b. Athlete's foot

______c. Ringworm

______d. Thrush

10. Select from the list below common diseases caused by viruses. Place an "X" in the correct blanks.

______a. Shingles (herpes zoster)

______b. Fever blisters (herpes simplex)

______c. Thrush

______d. Mumps (epidemic parotitis)

______e. Hepatitis

______f. Common cold (coryza)

______g. Influenza

11. Name common diseases caused by rickettsiae.

a. ____

b. ____

c. ____

12. Name parasitic worms (helminths) which may infect the human organism.

a. ____

b. ____

c. ____

d. ____

e. ____

13. Name basic methods for prevention of spread of microorganisms.

a. ____

b. ____

c. ____

14. Match terms associated with control of microorganisms to the correct definitions. Place the correct numbers in the blanks provided.

_____ a. Process of killing all microorganisms, including spores

_____ b. Free from disease-producing organisms

_____ c. Removal of most of the disease-producing organisms

_____ d. Substance capable of destroying germs

_____ e. Process of washing, scrubbing, and rinsing to clean equipment before sterilization

_____ f. Process of killing or stopping the growth of most microorganisms

_____ g. Contaminated with disease-producing organisms

_____ h. Substance that can prevent growth or action of organisms without killing them

_____ i. Substance that can destroy fungi

_____ j. Condition in which the growth of bacteria has been stopped but under the right circumstances could begin growing again

_____ k. Infection by contact with disease-producing organisms

_____ l. Substance that can destroy bacteria

_____ m. Immersion of equipment in a chemical solution of high germicidal potency

1. Aseptic
2. Germicide
3. Sterilization
4. Sanitation
5. Antiseptic
6. Decontamination
7. Septic
8. Fungicide
9. Disinfection
10. Contamination
11. Bactericide
12. Bacteriostasis
13. Cold sterilization

15. Research community resources that protect against harmful microorganisms.

16. Demonstrate the ability to:

    a. Use proper handwashing technique.

    b. Prepare a temporary slide.

    c. Use a microscope.

    d. Wrap packs for sterilization.

    e. Use an autoclave.

(NOTE: If activities 15 and 16 have not been finished prior to the test, ask the instructor when they should be completed.)

MICROBIOLOGY AND BACTERIOLOGY
UNIT II

ANSWERS TO TEST

1. a. 5
   - b. 7
   - c. 9
   - d. 3
   - e. 6
   - f. 1
   - g. 2
   - h. 4
   - i. 8
2. a. Metabolism
   - b. Growth
   - c. Reproduction
   - d. Irritability
   - e. Motion
   - f. Protection
3. a, c, d, f, g
4. a. 2
   - b. 1
   - c. 5
   - d. 4
   - e. 3
   - f. 6

5. a. Ocular or eyepiece
   b. Body
   c. Nosepiece
   d. Objectives
   e. Stage
   f. Stage clips
   g. Diaphragm
   h. Light
   i. Base
   j. Arm
   k. Coarse adjustment
   l. Fine adjustment

6. a. 5
   b. 4
   c. 3
   d. 1
   e. 2
   f. 11
   g. 12
   h. 7
   i. 8
   j. 6
   k. 9
   l. 10

7. a. Cocci
   b. Bacilli
   c. Spirilla

8. c, d, f

9. a. Y
   b. M
   c. M
   d. Y

10. a, b, d, f, g

11. a. Rocky Mountain spotted fever
    b. Typhus
    c. Q fever

12. a. Roundworm
    b. Pinworm
    c. Hookworm
    d. Trichinella
    e. Flatworm

13. a. Wash hands

b. Cover face when coughing or sneezing

c. Keep medical instruments totally free from microorganisms

14. a. 3

b. 1

c 6

d. 2

e. 4

f. 9

g. 7

h. 5

i. 8

j. 12

k. 10

l. 11

m. 13

15. Evaluated to satisfaction of instructor

16. Performance skills evaluated to satisfaction of instructor

DISEASE PROCESS
UNIT III

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge learned about diseases and their processes to develop techniques to assist in patient diagnosis, care, and treatment. This knowledge will be evidenced through completion of the assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the disease process to the correct definitions.
2. List common factors that contribute to or cause disease.
3. Distinguish between subjective and objective symptoms.
4. List symptoms that can occur when microorganisms invade the body.
5. Select from a list common symptoms of local infection.
6. Match common classes of diseases to the correct definitions.
7. Match types of nonspecific resistance or inborn immunity to the correct definitions.
8. Describe types of acquired immunity.
9. Distinguish between ways of producing acquired immunity.
10. Describe information that may be needed for initial reporting of patient's condition.
11. Select from a list common signs of cancer.
12. List methods used to diagnose cancer.
13. Select from a list common treatments for cancer.
14. Match types of benign and malignant tumors to the correct definitions.
15. Develop techniques to use in patient interviews.
16. Complete immunization records.

DISEASE PROCESS
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and assignment sheets.

   C. Discuss unit and specific objectives.

   D. Discuss information and assignment sheets.

   E. Obtain immunization forms or cards from local Health Departments and discuss proper ways to fill out; have students fill out their own card.

   F. Discuss immunizations and obtain copies of up-to-date time schedule for these to be given.

      (NOTE: It would be interesting to discuss immunizations, such as the one for smallpox that is not given to children as it once was.)

   G. Ask students to bring a newspaper or magazine article that discusses a new disease or a new treatment for an old one. Have class discussion or make a bulletin board display.

      Example: Legionaires disease

   H. Ask students to research a type of cancer and give an oral report in class.

   I. Invite resource person from oncology to discuss types of cancer and their treatment.

      Examples: Physician or nurse who specializes in cancer treatment

   J. Invite persons from local cancer-related organizations to speak to class about their involvement with patient education.

      Examples: Ostomy Club, Laryngectomy Club, Reach to Recovery

      (NOTE: There may be other groups in your area that assist in patient education, dealing with how to cope with cancer as a patient, or as a family member.)

   K. Ask American Cancer Society representative to bring equipment and speak on cancer detection, treatment and how persons can become involved in cancer prevention and early diagnosis campaigns.

      (NOTE: Consult local directory for current address and telephone number of the chapter in your city.)

L. Discuss new concepts in patient care facilities where families can live with patient undergoing treatment for cancer.

Example: Hospices

M. Use Assignment Sheet #1 to roleplay patient interviews.

N. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Transparency masters

1. TM 1--Active Immunity

2. TM 2--Passive Immunity

D. Assignment sheets

1. Assignment Sheet #1--Develop Techniques to Use in Patient Interviews

2. Assignment Sheet #2--Complete Immunization Records

E. Test

F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Thomas, Clayton L., M.D., ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F. A. Davis Company, 1977.

C. Thompson, Ella, and Rosdahl, Caroline. *Textbook of Basic Nursing.* Philadelphia: J. B. Lippincott Company, 1973.

D. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J. B. Lippincott Company, 1977.

IV. Films:

A. *Cancer: The Problem of Early Diagnosis.* Color, 30 minutes, 1949.

B. *Million Club.* Color, 28 minutes, 1964.

C. *For a Wonderful Life.* Color, 12 minutes, 1973.

(NOTE: These films are available in Oklahoma from the Oklahoma State Department of Health, N. E. 10th Street and Stonewall, Oklahoma City, Oklahoma 73105.)

D. *The Embattled Cell.* Contact your local American Cancer Society concerning availability to programs on a free-loan basis.

V. Filmstrip--*Cancer Detection--Self Examination of the Breast and Pap Smear.* Available from Trainex Corporation, P. O. Box 116, Garden Grove, California 92642.

DISEASE PROCESS
UNIT III

INFORMATION SHEET

I. Terms and definitions

A. Etiology--Study of the cause of disease or theory of its origin

B. Acute--Relatively severe, but short-lasting illness

C. Chronic--Disease that may not be severe, but is prolonged or reoccurs for long periods of time

D. Communicable--Disease which may be passed from one person to another

E. Epidemic--Outbreak of infectious disease affecting many people at one time in one geographical area

F. Diagnosis--Use of scientific knowledge and tests to determine the cause and nature of an illness

G. Symptoms--Any change in the body or its functions that indicates disease or illness

H. Syndrome--Group of signs or symptoms that indicate a particular disease or abnormal condition

Examples: Dumping syndrome, Turner's syndrome

I. Disease--Condition of the body presenting a group of symptoms that sets it apart as a particularly abnormal condition

J. Infection--Condition in which the body is invaded by microorganisms of pathological nature

K. Malnutrition--Lack of proper foods and nutrients necessary for normal body functions

L. Neoplasm--New and abnormal growth of tissue

M. Degeneration--Deterioration or impairment of body tissues or organs that cannot be repaired or regenerated

N. Epithelium--Layer of cells forming the epidermis of the skin; also in mucous and serous membranes

O. Dyspnea--Labored or difficult breathing, sometimes accompanied by pain

P. Hemorrhage--Abnormal internal or external discharge of blood

Q. Diarrhea--Frequent passage watery bowel movements

(NOTE: If patient complains of diarrhea, the physician will want to know the number and frequency of bowel movements.)

INFORMATION SHEET

R. Connective tissue--Tissue which supports and connects other tissues

Examples: Mucous, fibrous, cartilage

S. Tumor--New growth of tissue that forms an abnormal mass and feeds on healthy tissue

T. Anorexia--Loss of appetite

U. Jaundice--Condition brought on by bilirubin in the blood, in which skin and whites of eyes appear yellow

(NOTE: Bilirubin is the orange-colored or yellowish pigment in bile. It can be found in very small amounts [illegible] blood unless some condition occurs that increases the amount.)

V. Benign--Non-progressive growth confined to one area

W. Malignant--Progressive and spreading growth

(NOTE: Benign tumors are not considered dangerous or life-threatening unless they spread to areas that hamper body function. Malignant tumors are considered dangerous because they usually grow and spread quickly.)

X. Metastasis--Movement of malignant cells from one part of the body to another through circulatory and lymph system

(NOTE: Metastasis particularly concerns the movement of cancerous cells to other body parts. The first area affected is called the *primary site*; then it *metastasizes* to other body parts.)

Y. Chemotherapy--Use of chemical agents to treat disease

(NOTE: Often in cancer chemotherapy, the agent is non-specific, and will destroy healthy tissue along with the diseased tissue.)

Z. Cobalt-60--Common form of radioactive isotope used to treat malignancies

(NOTE: This is only one form of x-ray or the use of isotopes used in cancer treatments.)

AA. Immunology--Study of resistance to disease

BB. Immunity--Resistance to disease

CC. Antigen--Any substance which stimulates the formation of antibodies when introduced into the body

DD. Antibody--Protein substance developed by the body in response to the presence of an antigen

INFORMATION SHEET

EE. Pandemic--Disease that may affect a large population in many different parts of the world, or a very large region

FF. Endemic--Disease that occurs in a particular region or area, but in smaller cases

GG. Radium therapy--Treatment using isotope rays to destroy malignant cells

HH. Oncology--Branch of medicine that deals with tumors

II. Common factors that contribute to or cause disease

A. Disease-producing organisms

B. Physical agents

Examples: Extreme heat, cold, injuries

C. Malnutrition

D. Chemicals

E. Neoplasms

F. Birth defects

G. Degenerative process

(NOTE: During the aging process the body must be well cared for or degenerative deterioration can take place.)

III. Subjective and objective symptoms

A. Subjective symptoms--Sensations that only the patient knows about and reports

Examples: Nausea, headache, pain, itching

B. Objective symptoms--Signs that can be noted by an observer

Examples: Rash, swelling, discoloration, wounds

IV. Symptoms that can occur when microorganisms invade the body

(NOTE: These symptoms can be *local,* limited to an affected area, or systemic, affecting most or all of the body.)

A. Cough

B. Dyspnea

INFORMATION SHEET

C. Fever

D. Hemorrhage

E. Diarrhea

F. Edema

G. Anorexia

H. Sharp increase or decrease in vital signs

I. Inflammation

J. Fatigue

K. Jaundice

L. Emesis

(NOTE: This symptom is also known as *vomitus.*)

M. Cyanosis

(NOTE: Cyanosis is seen as bluish discoloration of the skin.)

V. Common symptoms of local infection

A. Pain

B. Redness

C. Heat

D. Swelling

E. Loss of function

F. Formation of pus

VI. Classes of diseases

A. Deficiency--Results from a lack of one or more nutrients in the diet

Example: Scurvy is a result of the lack of Vitamin C

Rickets occurs when there is lack of Vitamin D

B. Metabolic--Caused by a disturbance in one or more glands that produce internal secretions

Example: Diabetes, Addison's disease

INFORMATION SHEET

C. Hereditary--Disorder that one or both parents pass on to an embryo that impairs some body function

Example: Hemophilia or prolonged blood-coagulation time is a disorder transmitted by the female but carried to the male

D. Infectious--Caused by invasion of microorganisms into the body

Example: Common cold

E. Congenital--Disorder present at birth, not transmitted through genes, but due to some unfavorable condition that has interfered with normal development

Examples: Cleft palate, congenital heart disease

F. Occupational--Caused by conditions encountered in one's job

Example: Lung disease suffered by coal miners

G. Neoplastic--Caused by growth of abnormal tissues or tumors; may be benign or malignant

VII. Types of nonspecific resistance or inborn immunity

A. Species resistance--One species of animals is resistant to diseases which another species would be afflicted by

Examples: Humans get only a few diseases that are common in lower species and fewer lower animals contract diseases known to humans

B. Racial or group resistance--Certain races or groups are resistant to some diseases that may attack other groups

Examples: American Indians were very susceptible to smallpox; Mexicans seem to have a natural immunity to some intestinal infections

C. Individual resistance--Gained by inherited or genetic factors and may vary from time to time

D. Mechanical and chemical barriers--Body is protected by various factors and normal functions

Examples: Unbroken skin, lacrimal secretions, mucous membranes and gastric secretions all help protect body from disease

E. Phagocytosis--Ingesting of microorganisms, other cells, and foreign particles by certain cells

Examples: Leukocytes and monocytes

F. Inflammation response or reaction--Living body tissue responds to irritation or injury by inflammation of affected area

Examples: The reddened area or scab area that is seen around a wound

INFORMATION SHEET

VIII. Types of acquired immunity (Assignment Sheet #2)

(NOTE: Immunization records should be kept current.)

A. Active

1. Produced when antigens, microorganisms (exotoxins), are introduced into the body, causing the body to manufacture specific antibodies

2. May last for years or a lifetime

B. Passive

1. Produced when antibodies or antitoxins, developed by another person or animal, are injected into the body

2. May be temporary

IX. Ways of producing acquired immunity

A. Active (Transparency 1)

1. Having had the disease

2. Vaccination

B. Passive (Transparency 2)

1. Antibodies transferred from mother to fetus

2. Injection of gamma globulin

3. Injection of antitoxins

X. Information that may be needed for initial reporting of patient's condition (Assignment Sheet #1)

(NOTE: The medical assistant is often responsible for obtaining information from a patient concerning the symptoms of illness. This information will be given to the physician to assist in diagnosis and treatment.)

A. Measurement of pain

1. Intensity

Examples: Mild, moderate, severe

2. Location

(NOTE: After determining region of body, be sure to ask if pain radiates to other areas.)

INFORMATION SHEET

3. Duration

   Examples: Intermittent or persistent

4. Controllability

   Examples: Controlled by medication, pain worsened or made better by change in body position

B. Elimination

1. Bowel habits

   Examples: Constipation, diarrhea, odor, color, consistency, any discomfort when passing stool

2. Voiding

   Examples: Amount, color, odor, discomfort, frequency

3. Discharge

   Examples: From what area, color, odor, consistency

4. Vomiting

   Examples: Amount, frequency, color, odor, consistency, type (projectile, dry)

C. Emotional and mental reactions

Examples: Mental alertness, stability, speech patterns

(NOTE: The MA needs to be very careful in approaching the patient who may have emotional or mental symptoms due to shock, overdose, or other conditions.)

D. Amount and type of sleep

Examples: Insomnia or continual drowsiness

E. Amount and type of food taken

Examples: Type of diet and amounts, anorexia, nausea, vomiting after certain foods or liquids, excessive hunger or thirst, condition of mouth and teeth, difficulty in chewing or swallowing, indigestion

F. Body position and movement

Examples: Difficulty with coordination, balance, stiffness, weakness of limbs

INFORMATION SHEET

XI. Common signs of cancer

- A. Any sore that does not heal
- B. A lump or thickening in the breast or elsewhere
- C. Any change in normal bowel habits
- D. Unusual bleeding or discharge
- E. Persistent indigestion or difficulty in swallowing
- F. Any change in a wart or mole

  (NOTE: Look for change in color, size or unusual growth.)
- G. Persistent hoarseness or cough

XII. Methods used to diagnose cancer

- A. Blood tests

  Examples: Bone marrow puncture
- B. Cytology or cell examination

  (NOTE: *Cyto* refers to cell.)
- C. Scope exam

  Example: Sigmoidoscopy, endoscopy, gastroscopy
- D. X-ray

  Examples: CAT scan, mammography
- E. Biopsy
- F. Surgery (exploratory)

XIII. Common treatments for cancer

- A. Chemotherapy
- B. Cobalt
- C. Radium
- D. Surgery

INFORMATION SHEET

XIV. Types of benign and malignant tumors

A. Benign tumors

1. Papilloma--Made up of epithelial tissue; may branch or develop lobes

   Example: Warts

2. Osteoma--Comes from connective tissue but is found in the bones

3. Angioma--Composed of small lymph or blood vessels

   Example: Birthmark such as the port-wine stain

4. Glioma--Composed of connective tissue within the central nervous system

   (NOTE: These tumors can be benign or malignant. A *gliosarcoma* is a malignant form.)

5. Adenoma--Originates from epithelial tissue growing in and around the glands

6. Nevus--Outgrowth of new skin, usually pigmented

   Example: Moles

   (NOTE: A nevus can be benign but become malignant due to constant irritation.)

7. Lipoma--Connective tissue tumor originating in fatty tissue

8. Myoma--Tumor of the muscle tissue

   Example: Uterine fibroids

B. Malignant tumors

1. Carcinoma--Made up of epithelial tissue cells that tend to invade other tissues

   Examples: Common sites are the skin, mouth, lung, breast, stomach, colon, and the uterus

2. Sarcoma--Originates in the connective tissue

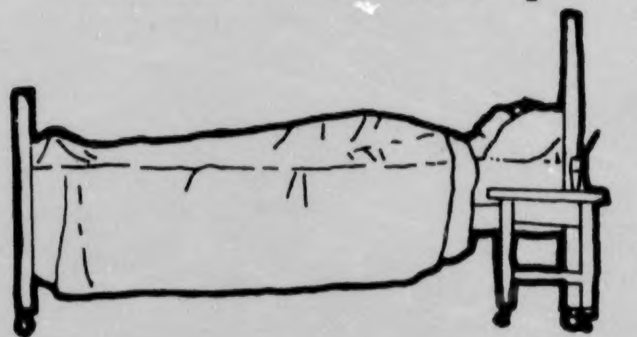
   Examples: Tumors that are spread by the bloodstream

3. Myeloma--Tumor originating in bone marrow

   (NOTE: There are other types and places for tumors to arise. The name of the tumor will depend on the area of growth and the type of cell.)

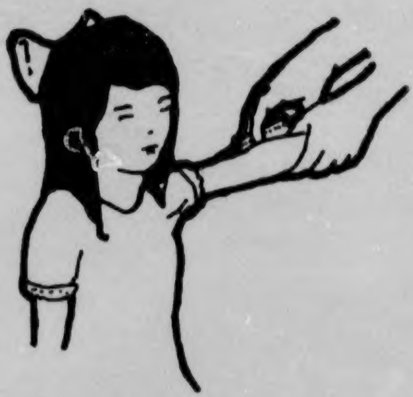
4. Melanoma--Pigmented mole or tumor

Active Immunity



Person Becomes Ill with Disease, Manufactures Antibodies. Immunity Lasts.

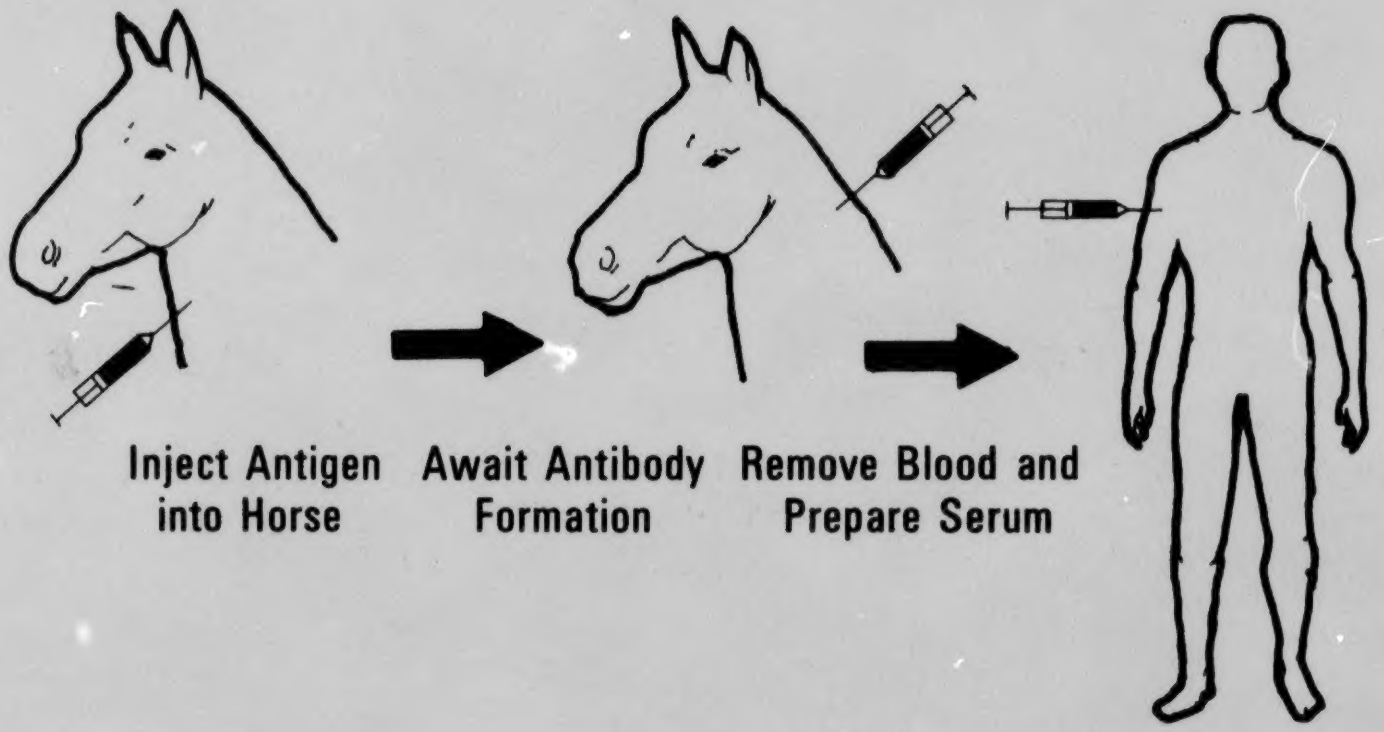
OR



Person Is Vaccinated or Innoculated.

Person Produces Own Antibodies. Immunity Lasts for Months or Years.

Passive Immunity



Inject Antigen into Horse

Await Antibody Formation

Remove Blood and Prepare Serum

Inject Serum into Person

DISEASE PROCESS
UNIT III

ASSIGNMENT SHEET #1--DEVELOP TECHNIQUES TO USE IN PATIENT INTERVIEWS

NAME ______________________________ SCORE ________________

The medical assistant is often the first person to communicate with the patient in the physician's office. Questions to determine what type of appointment to make, the priority of the condition, and to assist the physician in determining diagnosis and treatment, must be asked. Using the case studies below, write questions that the MA should ask the patient concerning his or her illness. Discuss these in class or roleplay the parts of the patient and the MA for direct feedback.

(NOTE: Be alert for any clues that the person is giving you false information or covering up some important facts.)

1. Mr. A. has called in and is speaking in a very hoarse voice. He complains of difficulty in breathing, sore throat and fever. It began with a headache, and overnight, these other symptoms have appeared.

   QUESTIONS:

2. Mrs. S. calls to say she is having severe abdominal cramps and vomiting. She feels cold and clammy and is very weak.

   QUESTIONS:

ASSIGNMENT SHEET #1

3. Ms. J. calls in quite frantic as she has been bleeding from the rectum and feels quite weak and nauseated.

QUESTIONS:

4. Mr. X. is having chest pain and has come in to your office and is standing at the desk. He appears quite ill and frightened.

QUESTIONS:

5. Miss B. has come in for her annual physical exam. While you are performing routine vital signs she begins to complain about pain in her abdomen.

QUESTIONS:

DISEASE PROCESS
UNIT III

ASSIGNMENT SHEET #2--COMPLETE IMMUNIZATION RECORDS

NAME______________________________ SCORE__________

Science has given the world the opportunity to prevent many deadly diseases by developing immunizations and vaccines. Small children should be given these immunizations at an early age and adults should keep their immunizations current by having boosters at various intervals. In todays mobile society, accurate records should be kept and carried to new homes and physicians. As a medical assistant it is important for you to know how to fill these records out and to instruct patients how to keep a home record for all of the family. Using your own immunization information, fill out the following sample records. Maybe this would be a good time for you to update your own protection against disease.

RECORD GIVEN TO PARENT OR PATIENT

PRIMARY IMMUNIZATIONS

Age	Vaccines	Comments
2 Months 4 Months 6 Months	DPT & Polio DTP & Polio DTP & Polio	DTP--0.5 ml Diptheria, Pertussis and Tetanus (Absorbed Type) administered intramuscularly. Polio--Trivalent Oral Polio Vaccine (TOPV)
15 Months	Measles Rubella (Mumps)	M-R--One dose (0.5 ml) of Measles/Rubella combined administered subcutaneously OR M-M-R--One dose of Measles/Mumps/Rubella combined administered subcutaneously.
18 Months	DTP & Polio	These doses are considered to be an integral part of the primary immunization series.

BOOSTER IMMUNIZATIONS

6 Years	DTP & Polio	Should be given prior to school entry. Substitute 0.5 ml Td (Adult Strength) for children age seven and above.
Every 10 Years	Td (Adult)	0.5 ml Td (Adult Strength) should be given intramuscularly at ten-year intervals to persons age seven and above.

ASSIGNMENT SHEET #2

PRIMARY IMMUNIZATIONS

Vaccine	Date Given	Signature	Vaccine	Date Given	Signature
DTP-Dose 1			Polio-Dose 1		
DTP-Dose 2			Polio-Dose 2		
DTP-Dose 3			Polio-Dose 3		
Measles			Polio-Dose 4		
Rubella			Oklahoma Law requires no less than 3 DTP, one Measles, one Rubella and 4 Polio immunizations before school entry.		
Mumps					

BOOSTER IMMUNIZATIONS

DTP-Dose 4			Polio-Dose 5		
DTP-Dose 5			*		
Td-(Adult)			*		
Td-(Adult)			*		

DTP-Diphtheria-Pertussis-Tetanus Td-Diphtheria-Tetanus *Other Vaccine or Test

MA - 117-B

ASSIGNMENT SHEET #2

RECORD KEPT IN COUNTY HEALTH DEPARTMENT
OR PHYSICIAN'S OFFICE

NAME____________________ BIRTHDATE_______ PARENTS____________________

ADDRESS_________________________ CITY_____________ COUNTY_______________

I have read the Oklahoma State Department of Health information forms about Polio (Live & Killed) February 1977, Measles, Mumps, Rubella, DTP, Td Vaccines. I have had a chance to ask questions which were answered to my satisfaction. I believe I understand the benefits and risks of these vaccines and request that they be given to me or the person named for whom I am authorized to make this request.

Vaccine	Signature Parent/Guardian	Given			MFG-Lot No.
		Date	Site	By:	
POLIO-Dose 1					
POLIO-Dose 2					
POLIO-Dose 3					
POLIO-Dose 4					
POLIO-Dose 5					
DTP-Dose 1					
DTP-Dose 2					
DTP-Dose 3					
DTP-Dose 4					
DTP-Dose 5					
Td-Dose 1					
Td-Dose 2					
Td-Dose 3					
Td-Dose 4					
Td-Dose 5					
Measles					
Rubella					
Mumps					

IMMUNIZATION REGISTRATION RECORD

DISEASE PROCESS
UNIT III

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with the disease process to the correct definitions. Place the correct numbers in the blanks provided.

______a. Condition of the body presenting a group of symptoms that sets it apart as a particularly abnormal condition

______b. Deterioration or impairment of body tissues or organs that cannot be repaired or regenerated

______c. Frequent passage of watery bowel movements

______d. Any change in the body or its functions that indicates disease or illness

______e. Study of the cause of disease or theory of its origin

______f. Labored or difficult breathing, sometimes accompanied by pain

______g. Movement of malignant cells from one part of the body to another through circulatory and lymph systems

______h. Non-progressive growth confined to one area

______i. New growth of tissue that forms an abnormal mass and feeds on healthy tissue

______j. New and abnormal growth of tissue

______k. Tissue which supports and connects other tissues

______l. Common form of radioactive isotope used to treat malignancies

______m. Relatively severe but short-lasting illness

1. Cobalt-60
2. Tumor
3. Degeneration
4. Connective tissue
5. Etiology
6. Acute
7. Disease
8. Diarrhea
9. Benign
10. Metastasis
11. Dyspnea
12. Symptoms
13. Neoplasm

______ n. Layer of cells forming the epidermis of the skin; also in mucous and serous membranes

______ o. Use of chemical agents to treat disease

______ p. Loss of appetite

______ q. Condition in which the body is invaded by microorganisms of pathological nature

______ r. Abnormal internal or external discharge of blood

______ s. Outbreak of infectious disease affecting many people at one time in one geographical area

______ t. Progressive and spreading growth

______ u. Condition brought on by bilirubin in the blood, in which skin and whites of eyes appear yellow

______ v. Disease which may be passed from one person to another

______ w. Group of signs or symptoms that indicate a particular disease or abnormal condition

______ x. Lack of proper foods and nutrients necessary for normal body functions

______ y. Disease that may not be severe, but is prolonged or reoccurs for long periods of time

______ z. Use of scientific knowledge and tests to determine the cause and nature of an illness

______ aa. Treatment using isotope rays to destroy malignant cells

______ bb. Branch of medicine that deals with tumors

______ cc. Resistance to disease

______ dd. Study of resistance to disease

______ ee. Any substance which stimulates the formation of antibodies when introduced into the body

14. Epithelium
15. Chemotherapy
16. Anorexia
17. Hemorrhage
18. Infection
19. Chronic
20. Epidemic
21. Communicable
22. Jaundice
23. Diagnosis
24. Malnutrition
25. Syndrome
26. Malignant
27. Immunology
28. Pandemic
29. Radium therapy
30. Oncology
31. Antigen
32. Immunity
33. Endemic
34. Antibody

______ff. Disease that occurs to a particular region or area, but in smaller cases

______gg. Protein substance developed by the body in response to the presence of an antigen

______hh. Disease that may affect a large population in many different parts of the world, or a very large region

2. List common factors that contribute to or cause disease.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

g. ____________________

3. Distinguish between subjective and objective symptoms. Place an "X" in the blank before the definition of objective symptoms.

______a. Signs that can be noted by an observer

______b. Sensations that only the patient knows about and reports

4. List six symptoms that can occur when microorganisms invade the body.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

5. Select from the following list common symptoms of local infection. Mark each correct answer with an "X."

______a. Formation of pus

______b. Jaundice

______c. Swelling

______d. Heat

______e. Pain

______f. Vomiting

______g. Redness

______h. Loss of function

______i. Dizziness

6. Match common classes of diseases to the correct definitions. Place the correct numbers in the blanks provided.

______a. Caused by invasion of microorganisms into the body

______b. Results from a lack of one or more nutrients in the diet

______c. Caused by a disturbance in one or more glands that produce internal secretions

______d. Disorder present at birth, not transmitted through genes, but due to some unfavorable condition that has interfered with normal development

______e. Caused by growth of abnormal tissues or tumors; may be benign or malignant

______f. Caused by conditions encountered in one's job

______g. Disorder that one or both parents pass on to an embryo that impairs some body function

1. Neoplastic
2. Metabolic
3. Congenital
4. Occupational
5. Deficiency
6. Hereditary
7. Infectious

7. Match types of nonspecific resistance or inborn immunity to the correct definitions. Place the correct numbers in the blanks provided.

______a. Living body tissue responds to irritation or injury by inflammation of affected area

______b. One species of animals is resistant to diseases which another species would be afflicted by

______c. Gained by inherited or genetic factors and may vary from time to time

______d. Ingesting of mircrorganisms, other cells, and foreign particles by certain cells

1. Individual resistance
2. Phagocytosis
3. Mechanical and chemical barriers
4. Racial or group resistance
5. Species resistance
6. Inflammation response or reaction

_____e. Certain races or groups are resistant to some diseases that may attack other groups

_____f. Body is protected by various factors and normal functions

8. Describe types of acquired immunity.

   a. Active--______________________________

   ____

   ____

   b. Passive--______________________________

   ____

   ____

9. Distinguish between ways of producing acquired immunity. Place an "A" before active immunity and a "P" before passive immunity in the blanks provided.

_____a. Antibodies transferred from mother to fetus

_____b. Injection of antitoxins

_____c. Vaccination

_____d. Injection of gamma globulin

_____e. Having had the disease

10. Describe information that may be needed for initial reporting of patient's condition.

____

____

____

____

____

____

____

____

11. Select from the following list common signs of cancer. Mark each correct answer with an "X."

______a. Any sore that does not heal

______b. Persistent hoarseness or cough

______c. Unusual bleeding or discharge

______d. Any change in a wart or mole

______e. Persistent indigestion or difficulty in swallowing

______f. Projectile vomiting

______g. Any change in normal bowel habits

______h. Sudden weight gain

______i. A lump or thickening in the breast or elsewhere

12. List methods used to diagnose cancer.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

13. Select from the following list common treatments for cancer. Mark each correct answer with an "X."

______a. Surgery

______b. Diet

______c. Chemotherapy

______d. Cobalt

______e. Dialysis

______f. Radium

14. Match types of benign and malignant tumors to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Composed of small lymph or blood vessels

_____b. Made up of epithelial tissue; may branch or develop lobes

_____c. Tumor of the muscle tissue

_____d. Outgrowth of new skin, usually pigmented

_____e. Originates from epithelial tissue growing in and around the glands

_____f. Composed of connective tissue within the central nervous system

_____g. Connective tissue tumor originating in fatty tissue

_____h. Originates in the connective tissue

_____i. Comes from connective tissue but is found in the bones

_____j. Made up of epithelial tissue cells that tend to invade other tissues

_____k. Pigmented mole or tumor

_____l. Tumor originating in bone marrow

1. Glioma
2. Angioma
3. Lipoma
4. Sarcoma
5. Adenoma
6. Nevus
7. Myoma
8. Osteoma
9. Papilloma
10. Carcinoma
11. Myeloma
12. Melanoma

15. Develop techniques to use in patient interviews.

16. Complete immunization records.

(NOTE: If activities 15 and 16 have not been finished before the test, ask your instructor when they should be completed.)

DISEASE PROCESS
UNIT III

ANSWERS TO TEST

1. a. 7
   b. 3
   c. 8
   d. 12
   e. 5
   f. 11
   g. 10
   h. 9
   i. 2
   j. 13
   k. 4
   l. 1
   m. 6
   n. 14
   o. 15
   p. 16
   q. 18
   r. 17
   s. 20
   t. 26
   u. 22
   v. 21
   w. 25
   x. 24
   y. 19
   z. 23
   aa. 29
   bb. 30
   cc. 32
   dd. 27
   ee. 31
   ff. 33
   gg. 34
   hh. 28

2. a. Disease-producing organisms
   b. Physical agents
   c. Malnutrition
   d. Chemicals
   e. Neoplasms
   f. Birth defects
   g. Degenerative process

3. a

4. Any six of the following:
   a. Cough
   b. Dyspnea
   c. Fever

d. Hemorrhage
e. Diarrhea
f. Edema
g. Anorexia
h. Sharp increase or decrease in vital signs
i. Inflammation
j. Fatigue
k. Jaundice
l. Emesis
m. Cyanosis

5. a, c, d, e, g, h

6. a. 7
   b. 5
   c. 2
   d. 3
   e. 1
   f. 4
   g. 6

7. a. 6
   b. 5
   c. 1
   d. 2
   e. 4
   f. 3

8. Descriptions should include:
   a. Active
      1) Produced when antigens, microorganisms (exotoxins), are introduced into the body, causing the body to manufacture specific antibodies
      2) May last for years or a lifetime

b. Passive

1) Produced when antibodies or antitoxins, developed by another person or animal, are injected into the body

2) May be temporary

9. a. P

b. P

c. A

d. P

e. A

10. Description should include:

a. Measurement of pain

1) Intensity

2) Location

3) Duration

4) Controllability

b. Elimination

1) Bowel habits

2) Voiding

3) Discharge

4) Vomiting

c. Emotional and mental reactions

d. Amount and type of sleep

e. Amount and type of food taken

f. Body position and movement

11. a, b, c, d, e, g, i

12. a. Blood tests
    b. Cytology or cell examination
    c. Scope exam
    d. X-ray
    e. Biopsy
    f. Surgery (exploratory)

13. a, c, d, f

14. a. 2
    b. 9
    c. 7
    d. 6
    e. 5
    f. 1
    g. 3
    h. 4
    i. 8
    j. 10
    k. 12
    l. 11

15. Evaluated to the satisfaction of the instructor

16. Evaluated to the satisfaction of the instructor

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the digestive system to provide effective care and assist with treatment of patients when diseases and disorders attack these vital organs. The student should also be able to provide information concerning proper diet therapy and be able to calculate calories in a regular diet. This knowledge will be evidenced through completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the digestive system to the correct definitions.
2. Name sets of teeth and the number of teeth included in each set.
3. Label structures of the mouth.
4. Select from a list common diseases or disorders of the mouth.
5. Label the salivary glands.
6. Label the liver, pancreas, and adjacent structures.
7. Distinguish between functions of the liver, gallbladder, and pancreas.
8. Distinguish between common diseases and disorders of the liver, gallbladder, and pancreas.
9. Describe the beginning and ending of the digestive process.
10. Name factors necessary in maintaining the digestive system.
11. Label the digestive organs.
12. Distinguish between functions of the esophagus and stomach.
13. Distinguish between functions of the small and large intestines.
14. Match common diseases, disorders, and procedures related to the digestive system to the correct definitions.
15. Match terms associated with basic nutrition to the correct definitions.

16. Name functions of food.
17. Name basic nutrients.
18. Name the basic four food groups and the daily adult requirements of each.
19. Match terms associated with nutritional deficiency to the correct definitions.
20. Arrange in order steps in determining daily calorie requirements.
21. Research common diets used in treatment of specific health conditions.
22. Prepare a report on a current issue or problem concerning nutrition.
23. Make a food poster.
24. Calculate calories for a regular diet.

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

  A. Provide student with objective sheet.

  B. Provide student with information sheet.

  C. Make transparencies.

  D. Discuss unit and specific objectives.

  E. Discuss information and assignment sheets.

  F. Invite a dietitian to speak on good nutrition, special diets, or how to discuss diet with patient.

  G. Ask a food service instructor to speak to class about food spoilage and hazards of food canning and preparation.

  H. Assign a student or group of students to provide samples of special diet menus and have class taste foods.

  Example: High protein, low-sodium menus

  I. Provide students with assignment sheets and additional resources to complete them.

  J. Ask students to bring labels from foods to class and make bulletin board from them. Discuss the various preservatives and chemicals added to foods.

  K. Order pamphlets on good nutrition from Oklahoma Dairy Products Institute, 129 N.W. 44, Oklahoma City, Oklahoma 73109.

  L. Use model to demonstrate digestive organs and their location.

  M. Ask local meat market to provide animal digestive organs to allow students to see real organs.

  N. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

C. Transparency masters

1. TM 1--Deciduous Teeth and Permanent Teeth
2. TM 2--Structures of the Mouth
3. TM 3--Salivary Glands
4. TM 4--Liver, Pancreas, and Adjacent Structures
5. TM 5--Digestive Organs

D. Assignment sheets

1. Assignment Sheet #1--Research Common Diets Used In Treatment of Specific Health Conditions
2. Assignment Sheet #2--Prepare A Report on a Current Issue or Problem Concerning Nutrition
3. Assignment Sheet #3--Make a Food Poster
4. Assignment Sheet #4--Calculate Calories for a Regular Diet

E. Test

F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

IV. Other resource--Oklahoma Dairy Products Institute, 129 N.W. 44, Oklahoma City, Oklahoma 73109.

V. Films:

A. "Nutrition Sense and Nonsense." Color, 18 minutes, Oklahoma State Department of Health, 1963. Available from the Oklahoma State Department of Health, 3400 N. Eastern, Oklahoma City, Oklahoma 73105.

B. "More Than Food." Color, 23 minutes, Oklahoma State Department of Health, 1966.

C. "For Tomorrow We Shall Diet." Color, 24 minutes, Churchill Films, 1976. Available from Churchill Films, 622 N. Robertson Blvd., Los Angeles, California 90069.

(NOTE: "For Tommorrow We Shall Diet" is availalbe on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 W. 6th Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order film from the above address.)

D. "Foods: Fads and Facts." Color, 17 minutes, Alfred Higgins Productions, n.d. Available from Alfred Higgins Productions, 9100 Sunset Boulevard, Los Angeles, California 90069.

E. "Your Mouth." Color, 15 3/4 minutes, BFA Educational Media, 1972. Available from BFA Educational Media, 2211 Michigan Avenue, Santa Monica, California 90404.

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

INFORMATION SHEET

I. Terms and definitions

  A. Alimentary canal--Muscular digestive tube extending through body

  B. Antibodies--Protein substances in the blood developed by the body, usually in reaction to a specific foreign substance

  C. Diaphragm--Muscular membrane that separates the abdominal cavity from the thoracic cavity

  D. Digestion--Physical and chemical breakdown of complex foodstuffs into simpler substances which are absorbed into the blood and lymph systems or eliminated from the body

  E. Gastroenterology--Study of the digestive system

  F. Metabolism--Chemical process in organisms which turns food into substances used for heat and energy

  G. Peristalsis--Rhythmical waves of contraction which move food along the gastrointestinal tract

  H. Peritoneum--Serous membrane that covers the surface of most of the abdominal organs and lines the abdominal wall

  I. Sphincter--Ringlike muscle fibers which control an outlet, permitting it to open and close

  J. Toxin--Any poisonous substance of microbic, vegetable, mineral, or animal origin

II. Sets of teeth (Transparency 1)

  A. Deciduous--20

  B. Permanent--32

  (NOTE: Teeth are shaped according to function.)

III. Structures of the mouth (Transparency 2)

  A. Tongue

  B. Uvula

  C. Soft palate

  D. Hard palate

  E. Gums

INFORMATION SHEET

F. Teeth

G. Salivary glands

IV. Common diseases or disorders of mouth

A. Gingivitis

(NOTE: This is an infection of the gums.)

B. Stomatitis

(NOTE: This is an infection of the mucous lining of the mouth.)

C. Vincent's angina

(NOTE: This is a very contagious infection caused by a spirochete.)

D. Pyorrhea

E. Caries

V. Salivary glands (Transparency 3)

(NOTE: These glands secrete 1500cc of saliva daily and aid in digestion by changing starches to sugar.)

A. Parotid

(NOTE: These glands can be infected with a contagious disease called mumps.)

B. Sublingual

C. Submaxillary

(NOTE: These are also referred to as submandibular.)

VI. Liver, pancreas, and adjacent structures (Transparency 4)

A. Liver

B. Hepatic duct

C. Gallbladder

D. Cystic duct

E. Common bile duct

F. Pancreas

G. Pancreatic duct

H. Duodenum

INFORMATION SHEET

VII. Functions of the liver, gallbladder, and pancreas

A. Liver

1. Metabolizes carbohydrates, fats, and proteins
2. Manufactures blood proteins
3. Removes toxins, bacteria, and worn-out blood cells
4. Removes waste products from the blood
5. Manufactures cholesterol
6. Stores vitamins A, D, K, and B_{12}
7. Forms antibodies
8. Stores simple sugars
9. Manufactures bile which aids in metabolism of fats

B. Gallbladder--Stores bile until needed for digestion

C. Pancreas

1. Produces pancreatin, an exocrine secretion which is emptied into the duodenum
2. Produces insulin, an endocrine secretion which aids in carbohydrate metabolism

VIII. Common diseases and disorders of the liver, gallbladder, and pancreas

A. Liver

1. Hepatitis

   (NOTE: There are two types of hepatitis that can be contracted. Viral or infectious hepatitis is caused by a virus and can be spread orally or by injection, sometimes in epidemic proportions. Serum hepatitis is spread by blood transfusions, plasma, or needles that have been contaminated.)

2. Cirrhosis

   (NOTE: Cirrhosis is a chronic degenerative disease of the liver with many causes, among them nutritional deficiencies, alcoholism, cardiac conditions, obstructive problems, and poisons.)

B. Gallbladder

1. Cholecystitis
2. Cholelithiasis

INFORMATION SHEET

3. Biliary colic

   (NOTE: Some symptoms of these disorders are so similar to those of a heart attack many patients believe that they are having a heart attack.)

C. Pancreas

1. Diabetes
2. Pancreatitis

IX. Digestive process

A. Begins when foods are broken down by mechanical and chemical means into their simplest forms to be absorbed by the blood and used by the cells

   (NOTE: Carbohydrates, fats, and proteins are digestible.)

B. Ends when fecal material consisting of undigested foods, bacteria, mucous, and water is eliminated from the alimentary canal

   (NOTE: Roughage is indigestible, but is needed to add bulk to the diet and aid in mechanical digestion and elimination.)

X. Factors necessary in maintaining the digestive system

A. Proper care of mouth and teeth

B. Adequate diet including food from the basic four food groups

C. Adequate elimination through good elimination habits, proper diet, fluids, and exercise

D. Use of medication only as prescribed

E. Proper handling of foods including cleanliness, refrigeration, and cooking

F. Careful washing of hands before handling or preparing foods and after using toilet

G. Clean source of water

H. Control of flies and other insects

I. Moderate use of spices and other irritating substances to prevent irritation of lining of digestive tract

J. Maintenance of good tone in abdominal muscles by exercise and good posture

INFORMATION SHEET

XI. Digestive organs (Transparency 5)

A. Oral cavity (mouth)

B. Sublingual gland

C. Submaxillary gland

D. Parotid gland

E. Pharynx

F. Epiglottis

G. Esophagus

H. Stomach

(NOTE: The stomach absorbs alcohol, some drugs, and small amounts of water and glucose.)

I. Liver

J. Gallbladder

K. Pancreas

L. Small intestine

(NOTE: The small intestine is about 2.54 centimeters [1 inch] in diameter, 6.01 meters [20 feet] in length and is divided into the duodenum, jejunum, ileum, and ileocecal sphincter; it absorbs approximately ninety percent of nutrients.)

M. Large intestine

1. Cecum

2. Colon

(NOTE: The three parts of the colon are ascending, transverse, and descending.)

3. Sigmoid

4. Rectum

5. Anal canal

N. Appendix

INFORMATION SHEET

XII. Functions of the esophagus and stomach

A. Esophagus

(NOTE: The esophagus is a tubular passageway for food from mouth to stomach.)

1. Secretes mucus to aid in food movement
2. Begins peristalsis

B. Stomach

1. Prepares food for digestion by changing it from a solid to a semi-fluid material through peristalsis
2. Serves as a reservoir for food for the three or four hours needed for proper mixing
3. Secretes approximately 2000 cc of gastric juice per day
4. Begins digestion of proteins

XIII. Functions of the small and large intestines

A. Small intestine

1. Empties bile from the liver and pancreatic juice into the duodenum
2. Secretes intestinal juices
3. Digests and absorbs most food

B. Large intestine

1. Reabsorbs water, mineral salts, and vitamins
2. Provides a site for bacteria which produce vitamin K and other bacteria that aid in absorption
3. Secretes mucus to aid in the movement of feces

XIV. Common diseases, disorders, and procedures related to the digestive system

A. Heartburn--Burning sensation in the esophagus and stomach

(NOTE: Heartburn can be caused by sudden intake of large amounts of fluid causing stretching of lower part of the esophagus, excessive food intake, or food poisoning.)

INFORMATION SHEET

B. Anorexia--Lack or loss of appetite

C. Nausea--Inclination to vomit; uneasy feeling in lower esophagus or stomach

D. Vomiting--Expulsion of stomach contents

E. Flatulence--Excessive amounts of air in the stomach or intestine

F. Constipation--Abnormally delayed or infrequent passage of dry or hardened feces

G. Hemorrhoids--Dilated blood vessels in the anal area

H. Polyps--Growths attached to the mucous membranes of the colon

(NOTE: Polyps can occur in the nose, bladder, or uterus.)

I. Diarrhea--Frequent movement of the bowels; increased number of stools per day, often liquid or semi-liquid

J. Colitis--Inflammation of the colon

K. Colostomy--Incision into the colon to form an artificial anus or stoma

(NOTE: When a colostomy is performed, usually only a portion of the colon is removed. Stoma is usually on left side and will pass soft-formed stool.)

L. Ileostomy--Incision into the ileum to form an artifical anus or stoma

(NOTE: Opening will be on the right side and usually all colon removed. Discharge will be liquid stool.)

M. Ulcers--Areas of skin or mucous membranes in which tissues are highly irritated and are disintegrating

(NOTE: Ulcers in the digestive system are seen in the esophagus, stomach, or the duodenum. May also occur in the very first part of the small intestine.)

N. Appendicitis--Inflammation of the appendix

(NOTE: Acute appendicitis may indicate the need for removal.)

O. Gastritis--Inflammation of the stomach lining

P. Enteritis--Inflammation of the intestine

Q. Peritonitis--Inflammation of the peritoneum

INFORMATION SHEET

R. Ascites--Accumulation of fluid in the peritoneal cavity

S. Hernia--Protrusion of an organ or part of an organ through the muscular wall of the cavity in which it is usually contained

T. Sigmoidoscopy--Visualization of lower colon through a scope

U. Proctoscopy--Visualization of the rectum through a scope

XV. Basic nutrition terms and definitions (Assignment Sheet #1)

A. Nutrition--Study of foods and their relation to health

B. Nutrient--Chemical compound found in food

C. Dietetics--Science of the use of foods in health and disease

D. Diet therapy--Modifications in the patient's normal diet to meet requirements created by disease or injury

E. Fats--Lipids

F. Lipid--Oily substance not soluble in water

G. Hydrochloric acid--Normal constituent of gastric juices produced by glands in the stomach

H. Protein--Compound made up of amino acids

I. Enzymes--Complex proteins capable of inducing chemical changes in other substances

J. Carbohydrates--Starches and sugars

XVI. Functions of food

A. Provides heat

B. Promotes growth

C. Repairs tissues

D. Regulates body processes

XVII. Basic nutrients

A. Protein

B. Carbohydrates

C. Fat

D. Minerals

INFORMATION SHEET

E. Vitamins

F. Water

XVIII. Basic four food groups and the daily adult requirements of each (Assignment Sheet #3)

(NOTE: The main part of the diet should be selected from the four basic food groups. Other foods may be added to make meals more appealing and satisfying.)

A. Milk--Two servings

(NOTE: Children and pregnant women need three to four servings; teenagers and lactating mothers need four or more servings.)

B. Meat--Two or more servings

C. Bread and cereal--Four or more servings

D. Fruit and vegetables--Four or more servings, including one citrus fruit

XIX. Terms and definitions associated with nutritional deficiency (Assignment Sheet #2)

A. Nutritional deficiency--Insufficient amount of one or more essential nutrients in diet

B. Malnutrition--Lack of necessary food substances in body

C. Avitaminosis--Disease due to lack of vitamins in diet

D. Hypervitaminosis--Toxicity caused by excessive amounts of one or more vitamins

E. Rickets--Softened bone condition in children resulting from deficient deposits of calcium in bone-forming cartilages

F. Pellagra--Deficiency disease due to insufficient niacin and protein with dermatitis, diarrhea, anemia, and mental symptoms

G. Scurvy--Deficiency due to insufficient vitamin C; characterized by loss of energy, pain in limbs, weakness, and edema

XX. Steps in determining daily calorie requirement (Assignment Sheet #4)

A. Determine ideal weight

(NOTE: Tables giving desirable weights for adults are usually found in nutrition textbooks.)

INFORMATION SHEET

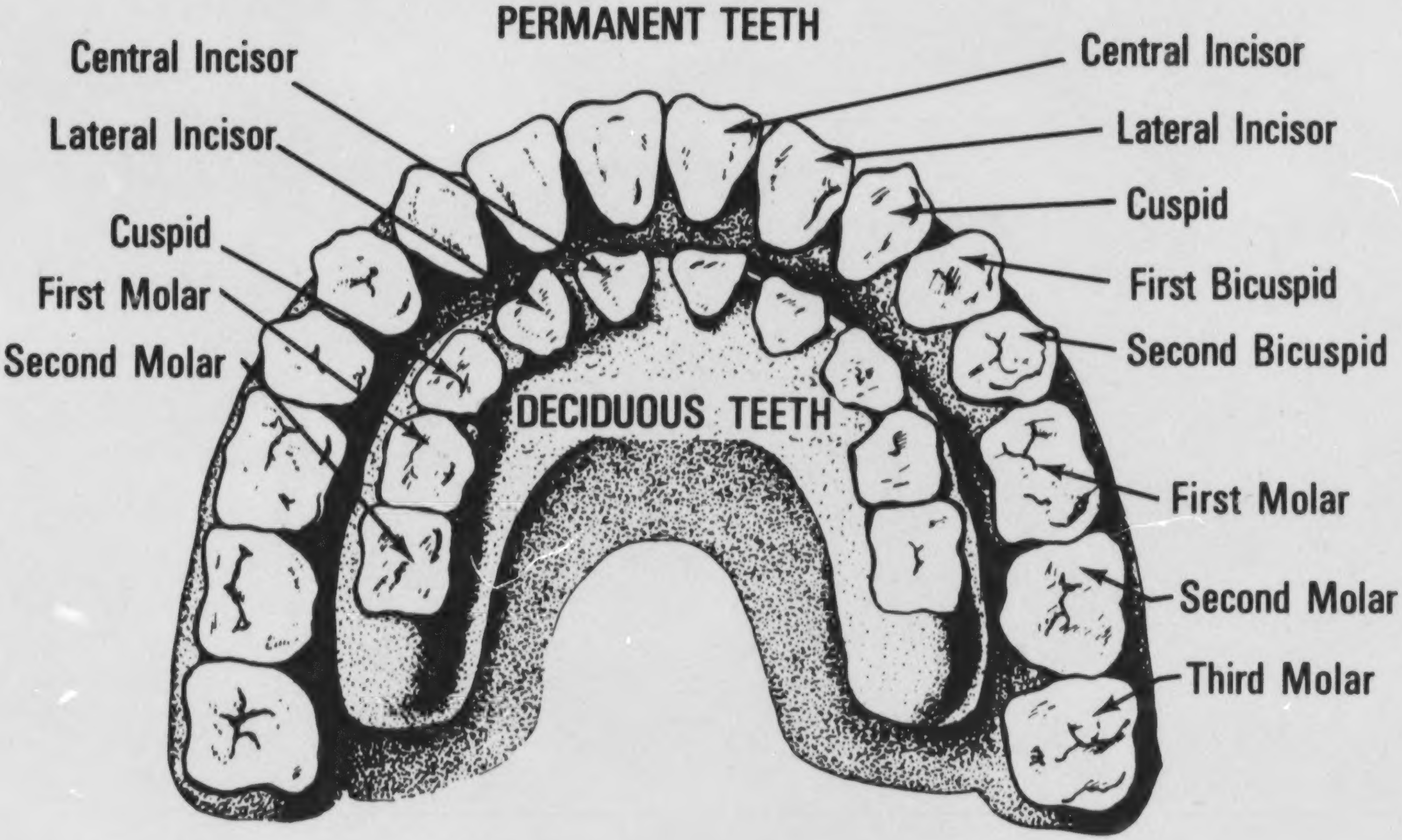
B. Determine calories needed

(NOTE: A moderately active woman needs 18 calories per pound, a moderately active man needs 20.5 calories per pound, and a man doing strenuous labor may need up to 28 calories per pound of ideal weight.)

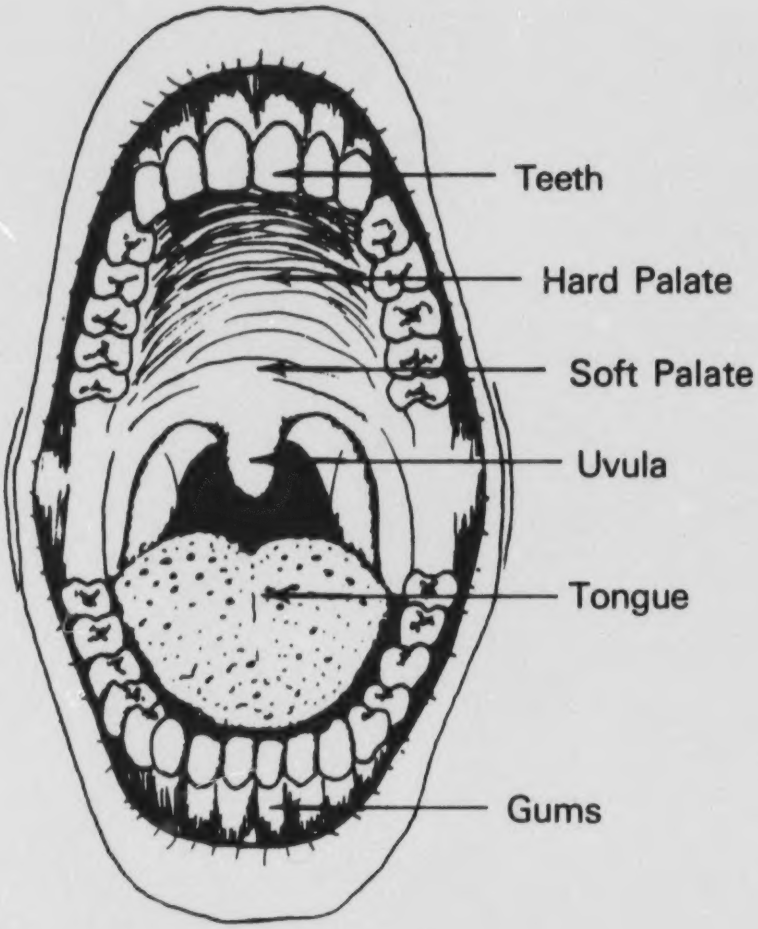
C. Multiply the ideal weight by calories needed

Example: Ideal weight of woman 125 pounds
×18 calories
2,250 calories per day

Deciduous Teeth and Permanent Teeth

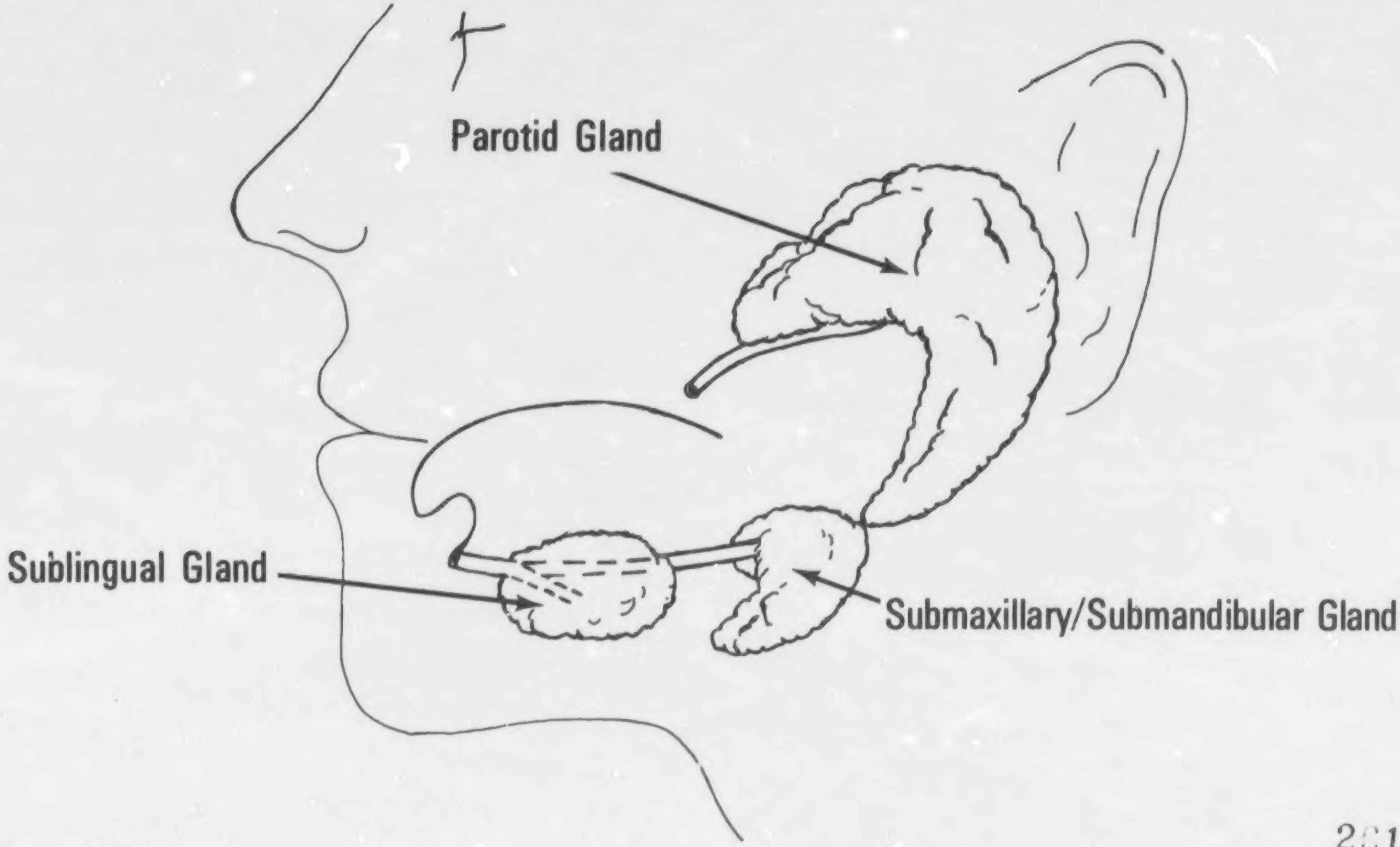

PERMANENT TEETH
Central Incisor
Lateral Incisor
Cuspid
First Molar
Second Molar
DECIDUOUS TEETH
Central Incisor
Lateral Incisor
Cuspid
First Bicuspid
Second Bicuspid
First Molar
Second Molar
Third Molar

Structures of the Mouth


Teeth
Hard Palate
Soft Palate
Uvula
Tongue
Gums

Used with permission of J.B. Lippincott Company from *The Human Body in Health and Disease*, 4th ed., by Ruth Lundeen Memmler and Dena Lin Wood, copyright 1977, page 201.

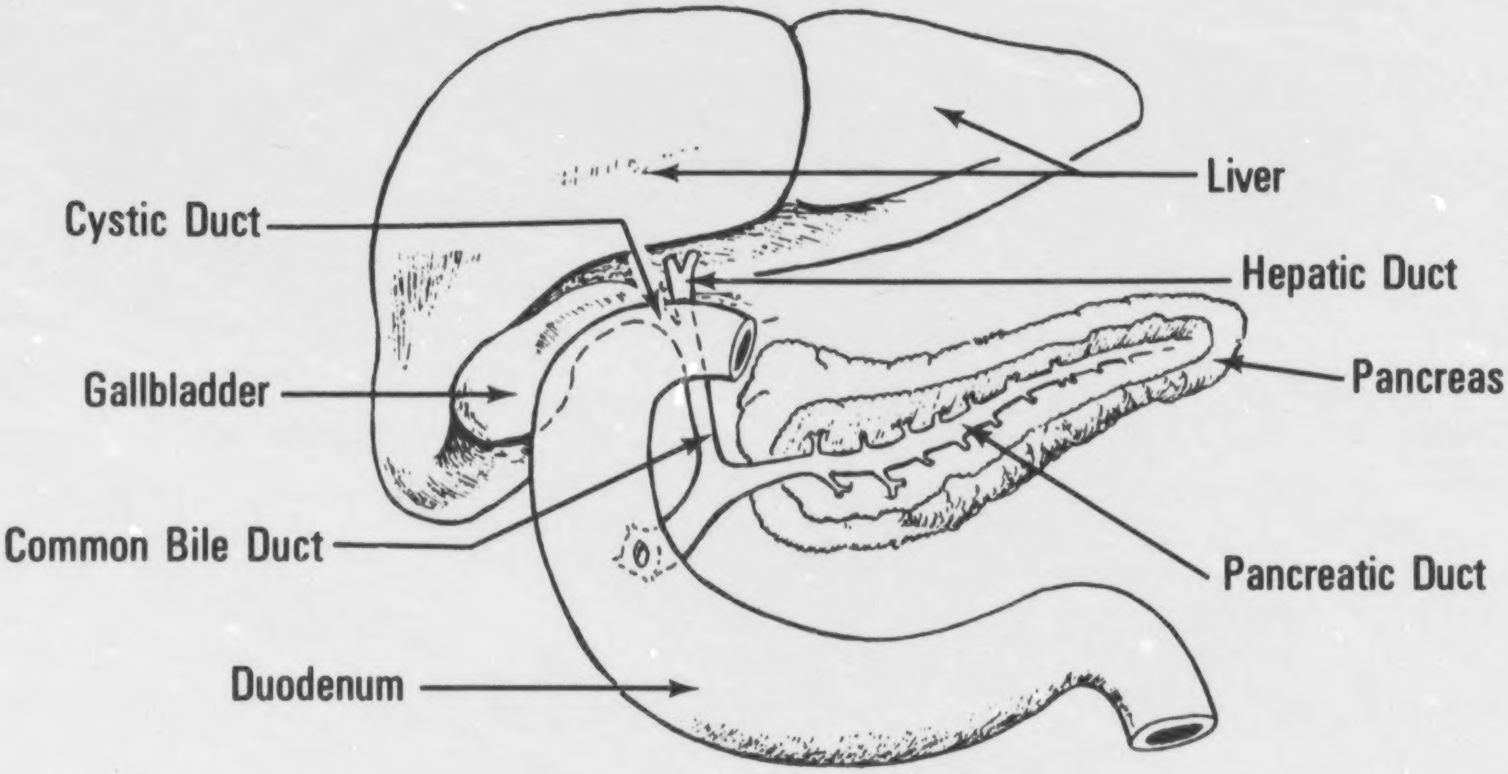
Salivary Glands


Parotid Gland
Sublingual Gland
Submaxillary/Submandibular Gland

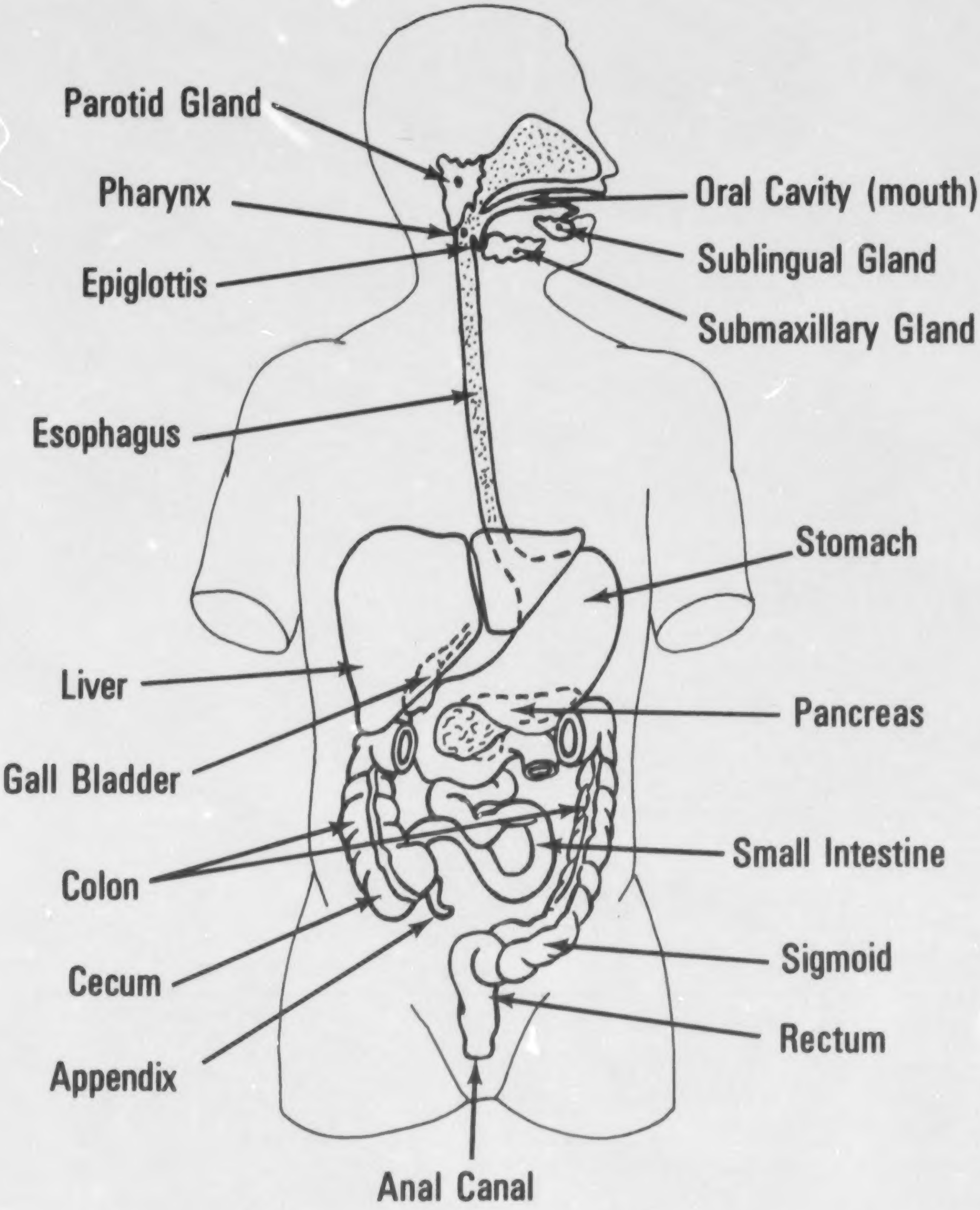
TM 3

MA - 151-B

Liver, Pancreas, and Adjacent Structures


Liver
Cystic Duct
Hepatic Duct
Gallbladder
Pancreas
Common Bile Duct
Pancreatic Duct
Duodenum

Digestive Organs


Parotid Gland
Pharynx
Epiglottis
Esophagus
Liver
Gall Bladder
Colon
Cecum
Appendix
Anal Canal
Oral Cavity (mouth)
Sublingual Gland
Submaxillary Gland
Stomach
Pancreas
Small Intestine
Sigmoid
Rectum

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

ASSIGNMENT SHEET #1--RESEARCH COMMON DIETS USED IN TREATMENT OF SPECIFIC HEALTH CONDITIONS

NAME ________________________________ SCORE ______________

Diet therapy is an important part of the treatment of many disorders and diseases. Using nutrition textbooks, magazines related to health and diet, resource persons in dietetics and medicine, choose three types of diets and give information about foods eliminated, increased, or altered, and amounts allowed. Give the types of diseases or disorders for which such a diet would be used.

TYPES OF DIETS	FOODS ELIMINATED, INCREASED, OR ALTERED	AMOUNTS ALLOWED	DISEASES OR DISORDERS
Diet #1 ________			
Diet #2 ________			
Diet #3 ________			

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

ASSIGNMENT SHEET #2--PREPARE A REPORT ON A CURRENT ISSUE OR PROBLEM CONCERNING NUTRITION

NAME ______________________________ SCORE ______________

Every day newspaper, radio, or television reports give out information concerning problems with today's nutrition. Issues being discussed include the cancer-producing agents being found in many foods, food shortages, and solutions to these shortages. Pollution of food products is causing great concern and people are becoming aware of products with additives that cause illness. Fad diets are popular among an increasingly overweight population. Using newspapers, magazines, or other sources, prepare a report about a current nutrition issue of interest to you.

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

ASSIGNMENT SHEET #3--MAKE A FOOD POSTER

NAME ____ SCORE _________________

Collect items to make a food poster.

Examples: Magazines with pictures of different kinds of food, scissors, paste or glue, heavy paper or poster board, felt-tip pens for lettering, other equipment as needed for individual creativity

Work in groups of three or four to prepare a food poster using one of the following subjects:

1. Principal sources of carbohydrates
2. Snack foods that are nutritious and those that are mostly "empty" calories
3. Sources of incomplete proteins
4. Sources of complete proteins
5. Foods containing visible fats
6. Foods containing invisible fats
7. Basic four food groups (on one poster or on four separate posters)

(NOTE: Another subject may be selected with the approval of the instructor.)

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

ASSIGNMENT SHEET #4--CALCULATE CALORIES FOR A REGULAR DIET

NAME ______________________ SCORE __________

Today's society has become very calorie conscious. Magazines and television advertise products produced for the calorie-watching population, and health articles attack obesity and junk foods full of empty calories. "You are what you eat" is a statement that may hit close to home. What do you eat? Are you getting the nutrients you need or calories you don't need? Start today and write down exactly what you have eaten and follow through for a week. Don't forget that candy bar and cola you had for break. Using a nutrition or other text, calculate each day's calories. Then refer back to Objective 20 in your unit and calculate how many calories you should be taking in. Are you over or under?

FOODS EATEN	NUMBER OF CALORIES
First Day	
______________	______________
______________	______________
______________	______________
______________	______________
______________	______________
______________	______________
	TOTAL: __________
Second Day	
______________	______________
______________	______________
______________	______________
______________	______________
______________	______________
______________	______________
	TOTAL: __________

ASSIGNMENT SHEET #4

FOODS EATEN	NUMBER OF CALORIES
Third Day	TOTAL: ____________
Fourth Day	TOTAL: ____________
Fifth Day	TOTAL: ____________

MA - 165-B

ASSIGNMENT SHEET #4

FOODS EATEN	NUMBER OF CALORIES
Sixth Day __________ __________ __________ __________ __________ __________	__________ __________ __________ __________ __________ __________ TOTAL: __________
Seventh Day __________ __________ __________ __________ __________ __________	__________ __________ __________ __________ __________ __________ TOTAL: __________

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

TEST

NAME ______________________ SCORE ______________

1. Match terms associated with the digestive system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Ringlike muscle fibers which control an outlet, permitting it to open and close

_____b. Physical and chemical breakdown of complex foodstuffs into simpler substances which are absorbed into the blood and lymph systems or eliminated from the body

_____c. Muscular membrane that separates the abdominal cavity from the thoracic cavity

_____d. Serous membrane that covers the surface of most of the abdominal organs and lines the abdominal wall

_____e. Chemical process in organisms which turns food into substances used for heat and energy

_____f. Rhythmical waves of contraction which move food along the gastrointestinal tract

_____g. Study of the digestive system

_____h. Muscular digestive tube extending through body

_____i. Any poisonous substance of microbic, vegetable, mineral or animal origin

_____j. Protein substances in the blood developed by the body, usually in reaction to a specific foreign substance

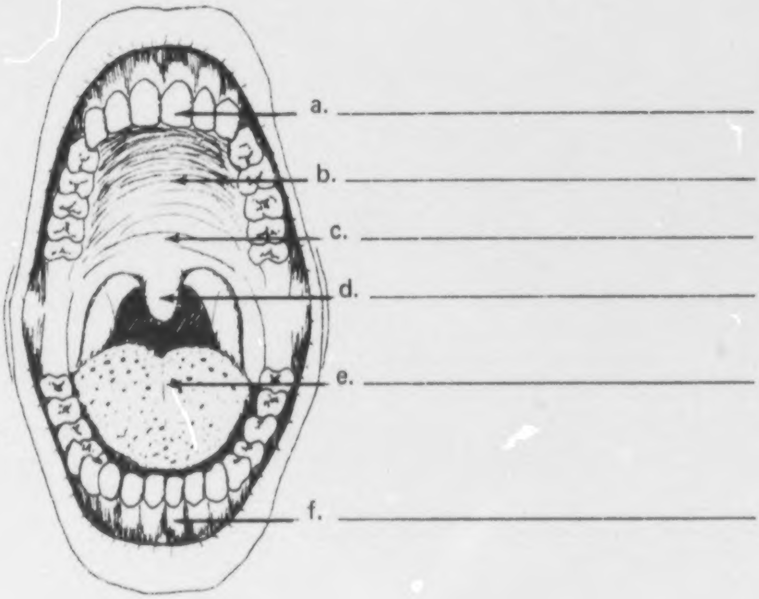
1. Alimentary canal
2. Peristalsis
3. Diaphragm
4. Peritoneum
5. Metabolism
6. Antibodies
7. Gastroenterology
8. Sphincter
9. Digestion
10. Toxin

2. Name the two sets of teeth and the number of teeth included in each set.

a. ______________________________________

b. ______________________________________

3. Label structures of the mouth. Write the correct names in the blanks provided.



4. Select from the list below common diseases or disorders of the mouth. Place an "X" in the correct blanks.

______a. Ascites

______b. Vincent's angina

______c. Caries

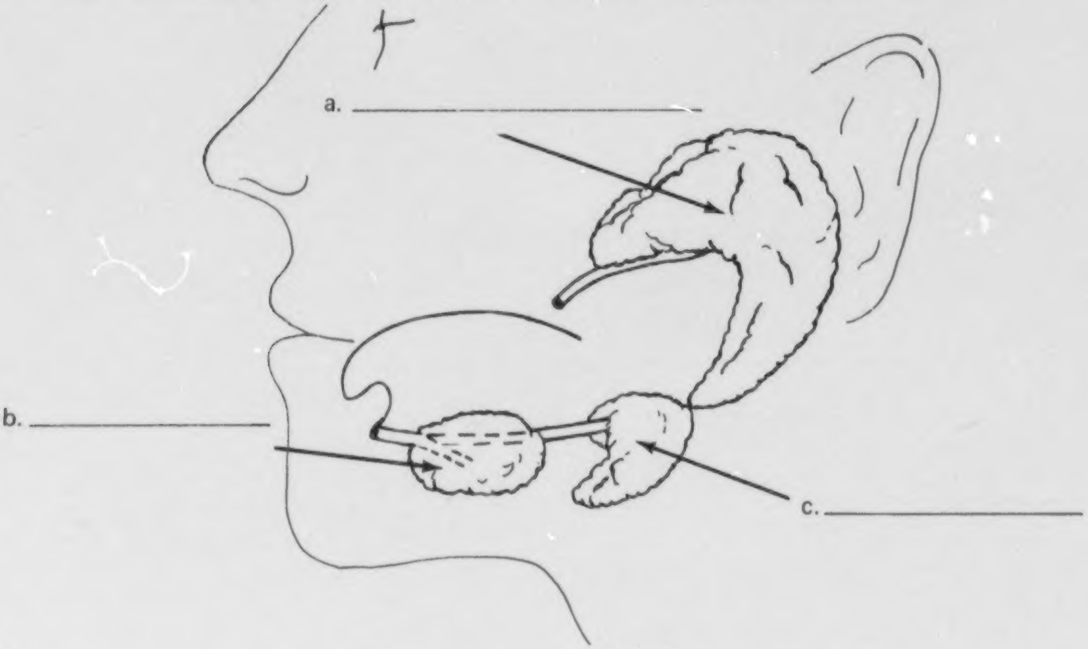
______d. Pleurisy

______e. Pyorrhea

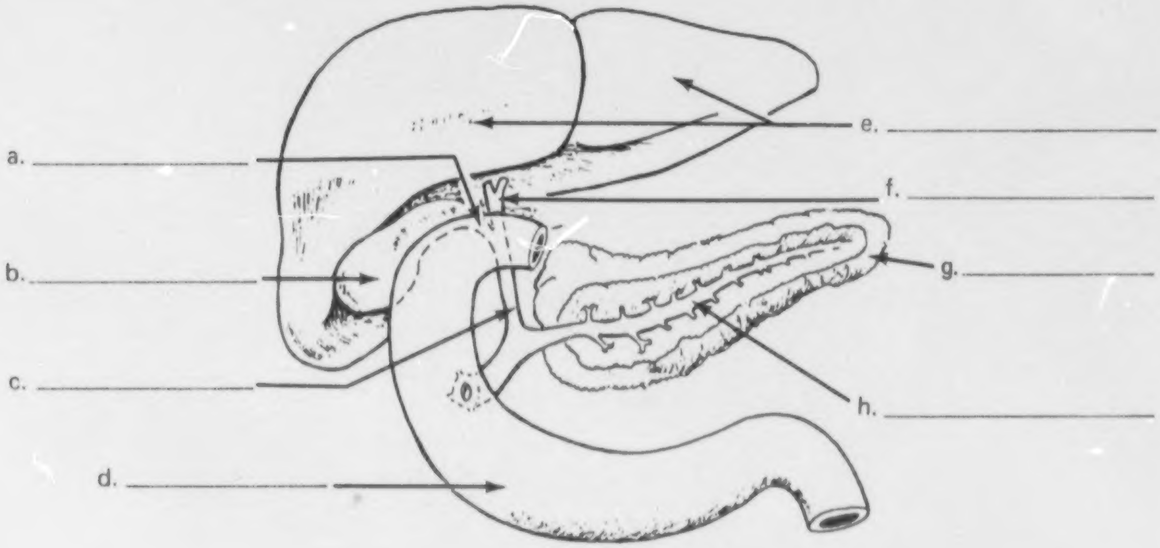
______f. Stomatitis

______g. Gingivitis

5. Label the salivary glands by writing the correct names in the blanks provided.



6. Label the liver, pancreas, and adjacent structures by writing the correct names in the blanks provided.



7. Distinguish between functions of the liver, gallbladder, and pancreas. Place an "L" for the liver, "G" for gallbladder, and "P" for pancreas in the correct blanks.

______a. Stores bile until needed for digestion

______b. Produces insulin, an endocrine secretion which aids in carbohydrate metabolism

______c. Stores simple sugars

______d. Manufactures blood proteins

______e. Produces pancreatin, an exocrine secretion which is emptied into the duodenum

______f. Metabolizes carbohydrates, fats, and proteins

______g. Removes waste products from the blood

______h. Manufactures bile which aids in metabolism of fats

______i. Forms antibodies

______j. Stores vitamins A, D, K, and B_{12}

______k. Manufactures cholesterol

______l. Removes toxins, bacteria, and worn-out blood cells

8. Distinguish between common diseases and disorders of the liver, gallbladder, and pancreas. Place an "L" for liver, "G" for gallbladder, and "P" for pancreas in the correct blanks.

______a. Biliary colic

______b. Hepatitis

______c. Diabetes

______d. Cholecystitis

______e. Cirrhosis

______f. Pancreatitis

______g. Cholelithiasis

9. Describe the beginning and ending of the digestive process.

____

____

____

10. Name seven factors necessary in maintaining the digestive system.

a. ______________________________

b. ______________________________

c. ______________________________

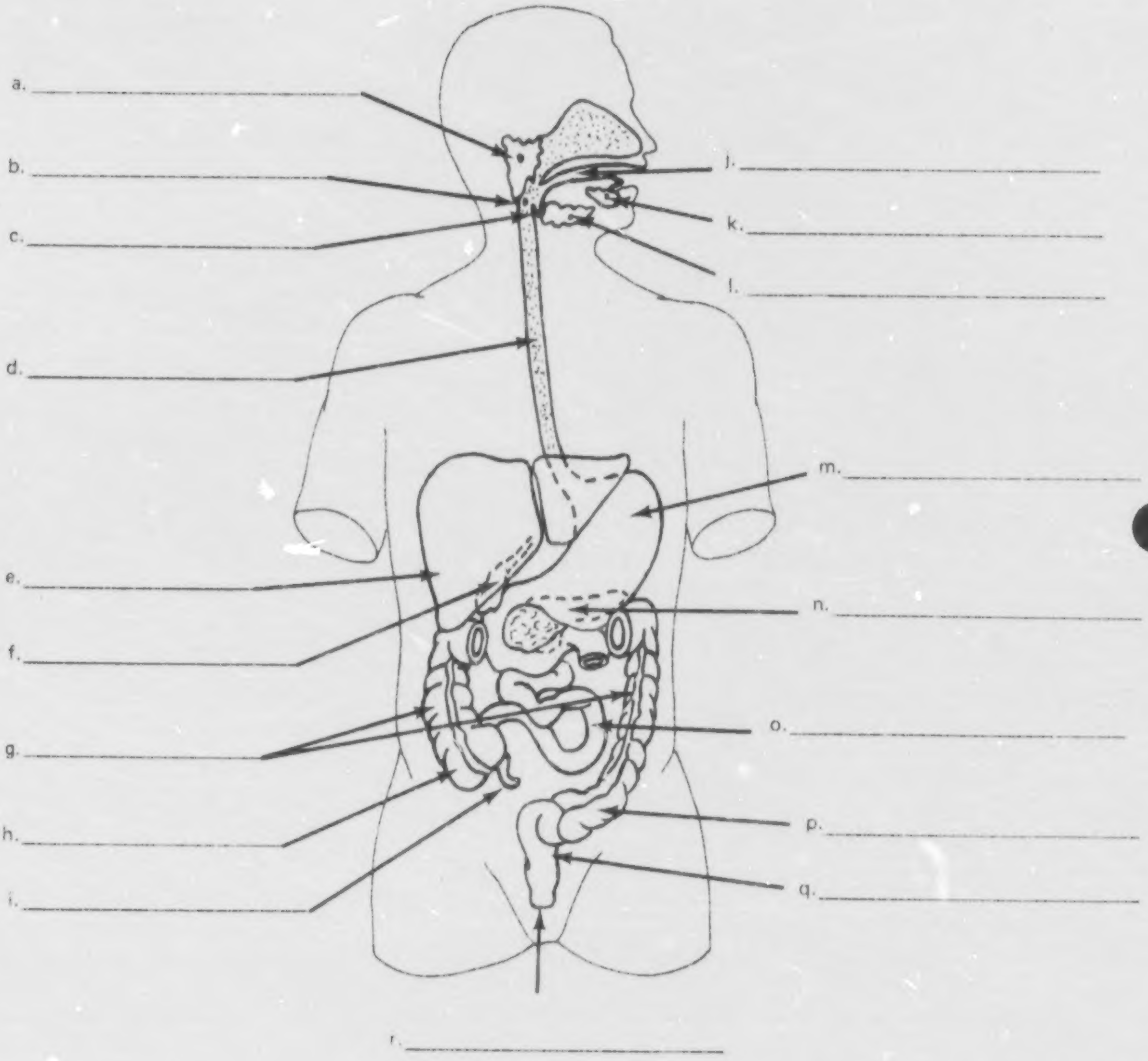
d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

11. Label the digestive organs by writing the correct names in the blanks provided.



a. ______________________

b. ______________________

c. ______________________

d. ______________________

e. ______________________

f. ______________________

g. ______________________

h. ______________________

i. ______________________

j. ______________________

k. ______________________

l. ______________________

m. ______________________

n. ______________________

o. ______________________

p. ______________________

q. ______________________

r. ______________________

12. Distinguish between functions of the esophagus and the stomach. Place an "X" in the blanks before functions of the esophagus.

    ______ a. Prepares food for digestion by changing it from a solid to a semi-fluid material through peristalsis

    ______ b. Begins digestion of proteins

    ______ c. Begins peristalsis

    ______ d. Secretes mucus to aid in food movement

    ______ e. Secretes approximately 2000 cc of gastric juice per day

    ______ f. Serves as a reservoir for food for the three or four hours needed for proper mixing

13. Distinguish between the functions of the small and large intestines. Place an "X" in the blanks before functions of the small intestine.

    ______ a. Digests and absorbs most food

    ______ b. Reabsorbs water, mineral salts, and vitamins

    ______ c. Empties bile from the liver and pancreatic juice into the duodenum

    ______ d. Provides a site for bacteria which produce vitamin K and other bacteria that aid in absorption

    ______ e. Secretes intestinal juices

    ______ f. Secretes mucus to aid in the movement of feces

14. Match common diseases, disorders, and procedures related to the digestive system to the correct definitions. Place the correct numbers in the blanks provided.

    ______ a. Inflammation of the colon

    ______ b. Lack or loss of appetite

    ______ c. Growths attached to the mucous membranes of the colon

    ______ d. Expulsion of stomach contents

    ______ e. Inflammation of the stomach lining

    ______ f. Accumulation of fluid in the peritoneal cavity

    ______ g. Areas of skin or mucous membranes in which tissues are highly irritated and are disintegrating

    1. Ascites
    2. Ulcers
    3. Colitis
    4. Polyps
    5. Anorexia
    6. Gastritis
    7. Vomiting

______h. Inflammation of the intestine

______i. Inflammation of the appendix

______j. Incision into the ileum to form an artificial anus or stoma

______k. Frequent movement of bowels; increased number of stools per day, often liquid or semi-liquid

______l. Dilated blood vessels in the anal area

______m. Inclination to vomit; uneasy feeling in lower esophagus or stomach

______n. Excessive amounts of air in the stomach or intestine

______o. Burning sensation in the esophagus and stomach

______p. Abnormally delayed or infrequent passage of dry or hardened feces

______q. Incision into the colon to form an artificial anus or stoma

______r. Inflammation of the peritoneum

______s. Visualization of the rectum through a scope

______t. Protrusion of an organ or part of an organ through the muscular wall of the cavity in which it is usually contained

______u. Visualization of the lower colon through a scope

8. Colostomy
9. Nausea
10. Diarrhea
11. Ileostomy
12. Heartburn
13. Appendicitis
14. Peritonitis
15. Hemorrhoids
16. Constipation
17. Sigmoidoscopy
18. Enteritis
19. Proctoscopy
20. Hernia
21. Flatulence

15. Match terms associated with basic nutrition to the correct definitions. Place the correct numbers in the blanks provided.

______a. Compound made up of amino acids

______b. Lipids

______c. Study of foods and their relation to health

______d. Complex proteins capable of inducing chemical changes in other substances

______e. Science of the use of foods in heatlh and disease

1. Dietetics
2. Fats
3. Protein
4. Enzymes
5. Nutrition

_____f. Normal constituent of gastric juices produced by glands in the stomach

_____g. Modifications in the patient's normal diet to meet requirements created by disease or injury

_____h. Oily substance not soluble in water

_____i. Chemical compound found in food

_____j. Starches and sugars

6. Diet therapy
7. Lipid
8. Carbohydrates
9. Nutrient
10. Hydrochloric acid

16. Name functions of food.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

17. Name basic nutrients.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

18. Name the basic four food groups and the daily adult requirements of each.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

19. Match terms associated with nutritional deficiency to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Disease due to lack of vitamins

_____b. Deficiency disease due to insufficient niacin and protein with dermatitis, diarrhea, anemia, and mental symptoms

_____c. Insufficient amount of one or more essential nutrients in diet

_____d. Softened bone condition in children resulting from deficient deposits of calcium in bone-forming cartilages

_____e. Toxicity caused by excessive amounts of one or more vitamins

_____f. Deficiency due to insufficient vitamin C; characterized by loss of energy, pain in limbs, weakness, and edema

_____g. Lack of necessary food substances in body

1. Hypervitaminosis
2. Pellagra
3. Scurvy
4. Malnutrition
5. Avitaminosis
6. Nutritional deficiency
7. Rickets

20. Arrange in order steps in determining daily calorie requirement. Place a "1" before the first step, a "2" before the second step, and so on in the blanks provided.

_____a. Determine calories needed

_____b. Multiply the ideal weight by calories needed

_____c. Determine ideal weight

21. Research common diets used in treatment of specific health conditions.

22. Prepare a report on a current issue or problem concerning nutrition.

23. Make a food poster.

24. Calculate calories for a regular diet.

(NOTE: If activities 21-24 have not been finished prior to the test, ask the instructor when they should be completed.)

DIGESTIVE SYSTEM AND BASIC NUTRITION
UNIT IV

ANSWERS TO TEST

1. a. 8
   b. 9
   c. 3
   d. 4
   e. 5
   f. 2
   g. 7
   h. 1
   i. 10
   j. 6
2. a. Deciduous–20
   b. Permanent--32
3. a. Teeth
   b. Hard palate
   c. Soft palate
   d. Uvula
   e. Tongue
   f. Gums
4. b, c, e, f, g
5. a. Parotid gland
   b. Sublingual gland
   c. Submaxillary gland
6. a. Cystic duct
   b. Gallbladder
   c. Common bile duct

- d. Duodenum
- e. Liver
- f. Hepatic duct
- g. Pancreas
- h. Pancreatic duct

7. a. G
   b. P
   c. L
   d. L
   e. P
   f. L
   g. L
   h. L
   i. L
   j. L
   k. L
   l. L

8. a. G
   b. L
   c. P
   d. G
   e. L
   f. P
   g. G

9. Description should include:
   a. Begins when foods are broken down by mechanical and chemical means into their simplest forms to be absorbed by the blood and used by the cells
   b. Ends when fecal material consisting of undigested foods, bacteria, mucous and water is eliminated from the alimentary canal

10. Any seven of the following:
    a. Proper care of mouth and teeth
    b. Adequate diet including food from the basic four food groups
    c. Adequate elimination through good elimination habits, proper diets, fluids, and exercise
    d. Use of medication only as prescribed
    e. Proper handling of foods including cleanliness, refrigeration, and cooking
    f. Careful washing of hands before handling or preparing foods and after using toilet
    g. Clean source of water
    h. Control of flies and other insects

i. Moderate use of spices and other irritating substances to prevent irritation of lining of digestive tract

j. Maintenance of good tone in abdominal muscles by exercise and good posture

11. a. Parotid gland
    b. Pharynx
    c. Epiglottis
    d. Esophagus
    e. Liver
    f. Gall bladder
    g. Colon
    h. Cecum
    i. Appendix
    j. Oral cavity (mouth)
    k. Sublingual gland
    l. Submaxillary gland
    m. Stomach
    n. Pancreas
    o. Small intestine
    p. Sigmoid
    q. Rectum
    r. Anal canal

12. c, d

13. a, c, e

14. a. 3
    b. 5
    c. 4
    d. 7
    e. 6
    f. 1
    g. 2
    h. 18
    i. 13
    j. 11
    k. 10
    l. 15
    m. 9
    n. 21
    o. 12
    p. 16
    q. 8
    r. 14
    s. 19
    t. 20
    u. 17

15. a. 3
    b. 2
    c. 5
    d. 4
    e. 1
    f. 10
    g. 6
    h. 7
    i. 9
    j. 8
16. a. Provides heat
    b. Promotes growth
    c. Repairs tissues
    d. Regulates body processes
17. a. Protein
    b. Carbohydrates
    c. Fat
    d. Minerals
    e. Vitamins
    f. Water
18. a. Milk--Two servings
    b. Meat--Two or more servings
    c. Bread and cereal--Four or more servings
    d. Fruit and vegetables-Four or more servings, including one citrus fruit
19. a. 5
    b. 2
    c. 6
    d. 7
    e. 1
    f. 3
    g. 4
20. a. 2
    b. 3
    c. 1

21. Evaluated to satisfaction of instructor
22. Evaluated to satisfaction of instructor
23. Evaluated to satisfaction of instructor
24. Evaluated to satisfaction of instructor

REPRODUCTIVE SYSTEM
UNIT V

UNIT OBJECTIVE

After completion of this unit, the student should be able to use information concerning the reproductive system to be more effective and knowledgeable in patient care, treatment, and education. The student should also be able to assist with pelvic exam and pap smear. This knowledge will be evidenced through completion of assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the reproductive system to the correct definitions.
2. Name functions of the male and female reproductive systems.
3. Identify parts and adjacent structures of the male reproductive system.
4. Identify parts of the female reproductive system.
5. Match male external and internal reproductive organs to the correct functions.
6. Match female external and internal reproductive organs to the correct functions.
7. Complete a chart on advantages, disadvantages, and effectiveness of types of birth control.
8. Match the stages of the twenty-eight day menstrual cycle to the correct descriptions.
9. Distinguish between presumptive and positive signs of pregnancy.
10. List danger signals during pregnancy that should be reported to physician.
11. Match terms associated with abortion to the correct definitions.
12. Discuss physiological changes that occur during menopause.
13. Match common diseases, disorders, and surgical procedures relating to the male and female reproductive systems to the correct definitions.
14. React to a current issue dealing with the reproductive system.
15. Demonstrate the ability to:
    a. Assist with a pelvic exam and pap smear.
    b. Teach self-examination of breasts.

REPRODUCTIVE SYSTEM
UNIT V

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

   A. Provide students with objective sheet.

   B. Provide students with information, assignment, and job sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information and assignment sheets.

   F. Invite resource persons to discuss disorders of reproductive system and treatment.

      Examples: Obstetricians, gynecologists, clinicians or practioners who deal with patients with reproductive system disorders

   G. Demonstrate and discuss procedures outlined in job sheet.

   H. Obtain various birth control devices, breast exam models, and pamphlets from companies who offer these products to use for discussion and demonstration.

      Example: Ortho

   I. Give test

II. Instructional materials:

   A. Objectives

   B. Information sheet

   C. Transparency masters

      1. TM 1--Male Reproductive System

      2. TM 2--Female Reproductive System (External Organs and Adjacent Structures)

      3. TM 3--Female Reproductive System (Internal Organs and Adjacent Structures)

      4. TM 4--Female Reproductive System (Uterus and Fallopian Tubes)

      5. TM 5--The Breast

      6. TM 6--The Menstrual Cycle

D. Assignment Sheet #1--React to a Current Issue Dealing with the Reproductive System

E. Job sheets

   1. Job Sheet #1--Assist with a Pelvic Exam and Pap Smear

   2. Job Sheet #2--Teach Self-Examination of Breasts

F. Test

G. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Memmler, Ruth, and Wood, Dena. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

C. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

IV. Films:

A. *Female Cycle.* Color, 18 minutes, Films Incorporated, 1972. Available from Films Incorporated, 733 Greenbay Road, Wilmette, IL 60091.

B. *Teenage Father.* Color, 28 minutes, CHSOC, n.d. Available from CHSOC.

(NOTE: The above films are available on a free-loan basis to Oklahoma teachers only from Oklahoma State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 West 6th, Stillwater, Oklahoma 74074. Out-of-state teachers must order from addresses listed.)

C. *The Human Body: Reproductive System.* Black and white, 13 1/2 minutes, Oklahoma State Department of Health, 1955. Available from Oklahoma State Department of Health, N.E. 10 and Stonewall, Oklahoma City, Oklahoma 73152.

D. *Your Pelvic and Breast Exam.* Color, 12 minutes, Perennial, n.d. Available from Perennial Ed., Inc., 477 Roger Williams, Box 855 Ravina, Highland Park, Illinois 60035.

E. *V.D.: Prevent It.* Color, 10 minutes, AHIP, 1972. Available from Alfred Higgins Productions, 9100 Sunset Boulevard, Los Angeles, California 90069.

F. *V.D. and Women.* Color, 17 minutes, Perennial, n.d. Available from Perennial Ed., Inc., 477 Roger Williams, Box 855 Ravina, Highland Park, Illinois 60035.

V. Filmstrips:

A. "Cancer Detection: Self-Examination of the Breast and Pap Smear." Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

B. "Veneral Disease." Trainex Corporation.

C. "Family Planning." Trainex Corporation.

REPRODUCTIVE SYSTEM
UNIT V

INFORMATION SHEET

I. Terms and definitions

A. Broad ligament--Fold of peritoneum that supports the uterus

B. Circumcision--Surgical removal of the prepuce

C. Climacteric--Period that marks the cessation of reproductive function in the female or diminishing testicular activity in the male

D. Endometrium--Mucous membrane lining of the uterus

E. Fertilization--Process by which sperm unites with ovum

F. Glans penis--Head of penis

G. Graafian follicle--Thin walled cavity in the ovary enclosing a developing ovum

H. Gynecology--Study of diseases of the female reproductive system

I. Lactiferous ducts--Ducts that convey milk

J. Menarche--Beginning of menstruation

K. Menopause--Normal condition that results in permanent cessation of menstrual activity

(NOTE: Menopause usually occurs between the ages of forty-two and fifty-four.)

L. Menstruation--Periodic discharge of blood and tissue from the non-pregnant uterus

M. Obstetrics--Branch of medicine that deals with management of pregnancy, labor, and post-partum

N. Ovum--Female reproductive cell

O. Perineum--Area between external genitalia and anus

P. Prepuce--Fold of skin over glans penis

Q. Puberty--Period at which one becomes capable of reproduction

R. Pubic--Pertaining to the os pubis, the anterior bone of the pelvis

S. Reproduction--Process by which a living organism produces a new individual of the same kind

INFORMATION SHEET

T. Scrotum--External pouch which contains testes

U. Semen–Thick, white secretions of male reproductive glands

V. Spermatic cord--Cord suspending the testes; composed of veins, arteries, lymphatics, nerves, and vas deferens

W. Spermatozoa--Male reproductive cell

X. Viable--Capable of maintaining an independent existence

Y. Viscid--Thick, sticky

Z. Vulva--External female genitalia

II. Functions of the male and female reproductive systems

A. Perpetuation of the human species

B. Sexual gratification

C. Secretion of hormones

III. Male reproductive system and adjacent structures (Transparency 1)

A. Testis or testicle (two)

(NOTE: The plural is testes or testicles.)

B. Scrotum

C. Epididymis (two)

(NOTE: The plural is epididymides.)

D. Vas deferens

(NOTE: This is also called ductus deferens.)

E. Ejaculatory duct (two)

F. Urethra

G. Prostate gland

H. Seminal vesicles (two)

I. Bulbourethral glands (two)

INFORMATION SHEET

- J. Penis
- K. Glans penis
- L. Prepuce
- M. Urinary bladder
- N. Rectum
- O. Pubic bone
- P. Kidney
- Q. Ureter

IV. Female reproductive system (Job Sheet #1)

- A. External organs and adjacent structures (Transparency 2)
    1. Mons pubis
    2. Clitoris
    3. Meatus of urethra
    4. Labia majora
    5. Labia minora
    6. Vaginal orifice
    7. Hymen
    8. Vestibule
    9. Perineum
    10. Anus
- B. Internal organs and adjacent structures (Transparencies 3 and 4)
    1. Uterus
    2. Fallopian tube (two)
    3. Ovaries (two)
    4. Pubic bone

INFORMATION SHEET

5. Cervix
6. Endometrium
7. Vagina
8. Urinary bladder
9. Urethra
10. Meatus of urethra
11. Rectum
12. Vaginal orifice
13. Labia majora
14. Labia minora

C. Breast (Transparency 5, Job Sheet #2)

(NOTE: Cancer of the breast is quite common in women and sometimes men. A monthly self-check of breasts may mean an early detection and treatment if cancer invades tissue.)

1. Nipple
2. Areola
3. Lactiferous ducts
4. Lobe of gland tissue
5. Adipose tissue
6. Pectoralis major
7. Ribs

V. Functions of the male external and internal reproductive organs

A. External male organs

1. Scrotum--Protects testes; regulates and maintains favorable temperature for sperm production
2. Testes--Produces sperm and testosterone
3. Epididymis--Collects and stores sperm while maturing; conducts sperm to outside

INFORMATION SHEET

4. Vas deferens--Transports sperm from testes to urethra
5. Penis and urethra--Carries semen into vagina during copulation; carries urine from bladder

B. Internal male organs

1. Seminal vesicles--Contribute essential components to semen
2. Prostate gland--Secretes alkaline fluids which enhance sperm mobility; contracts smooth muscles to aid ejaculation

   (NOTE: Men middle aged and older should have the prostate gland checked periodically for enlargement and tumors. The exam is quite simple and is performed by a physician using an exam glove and lubricant. Sometimes a smear is taken for examination.)

3. Bulbourethral or Cowper's glands--Secretes viscid alkaline fluid which removes urine residue; secrete mucus for lubrication
4. Vas deferens--Transports sperm from testes to urethra

VI. Functions of external and internal female organs (Transparencies 2, 3, 4, and 5)

A. External female organs

1. Mammary glands (breasts)--Primary function is lactation (secretion of milk)

   (NOTE: Lactiferous ducts carry secretions from many lobules to one opening in nipple.)

2. Mons pubis--Protection of pubic bone
3. Labia majora--Surround labia minora
4. Labia minora--Enclose the vestibule
5. Clitoris--Sexual excitation
6. Urethral orifice--Regulation of urine flow
7. Vaginal orifice--Opening of vagina
8. Perineum--Pelvic floor

   (NOTE: The term perineum is clinically used to mean the area between the vaginal orifice and the anus. The full use of the term, however, includes all structures between the mons pubis and the coccyx.)

INFORMATION SHEET

B. Internal female organs

1. Vagina--Reception of penis during copulation; passageway for infant during birth
2. Uterus--Menstruation; during pregnancy, protection and nourishment of fertilized ovum until it becomes a viable infant
3. Fallopian tubes (two)--Movement of ova from ovaries to uterus where fertilization usually takes place
4. Ovaries (two)--Production of hormones and an ovum, usually once a month from alternate sides
5. Bartholin's and Skene's glands--Secretion of lubricating fluid

INFORMATION SHEET

VII. Advantages, disadvantages, and effectiveness of types of birth control (Assignment Sheet #1)

TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
A. Pill (NOTE: Many brands are on the market today.)	Easy to take; periods usually shorter with less flow	May cause nausea, weight gain, breakthrough bleeding; increased incidence of vascular disease (NOTE: There has been much publicity about research findings concerning the possibility of tissue damage, causing cancer.)	99% - 100% (NOTE: Effectiveness will depend on participant's compliance with instructions on product usage.)
B. Diaphragm with spermicidal jelly	Not a systemic drug; no physical risks	Must be fitted by a doctor and checked periodically; must be inserted each time before intercourse and left in six to eight hours afterward; must be scrupulous in cleaning and storing	95% if used correctly with jelly
C. Foam (NOTE: There are many brands on today's market.)	Do not need prescription; easy to insert; no physical risk unless allergic to chemical	Must be scrupulous in cleaning applicator; must be inserted each time before intercourse	If used with a condom, 100%; without condom, 70-85%
D. Vaginal suppositories (NOTE: There are many brands available on today's market.)	No prescription needed; easy to insert; no physical risk unless allergic to chemical	Must be inserted each time before intercourse; must comply with time limits to allow suppository to dissolve and the amount of time spermicide lasts (NOTE: Some women feel a heat sensation as the suppository dissolves.)	If used with a condom, 100%; without condom, 85-90%

INFORMATION SHEET

TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
E. Condom (NOTE: Many different brands are available.)	Do not need prescription; no physical risks; reduces chance of contracting venereal disease	Male must take responsibility; lack of sensitivity; must be applied prior to intercourse	If used with foam, 100%; without foam, 95%
F. Tubal ligation	Permanent (NOTE: There are times when this procedure can be reversed, but this is very infrequent.)	Surgical procedure under general anesthesia, with post-operative discomforts; permanent sterilization	100%
G. Vasectomy	Permanent (NOTE: There are times when this procedure can be reversed, but this is infrequent.)	Surgical procedure, but can be done under local anesthesia; may have some discomfort and swelling	100%
H. IUD (Intra-uterine device (NOTE: Many forms are available.)	Does not need to be inserted each time	May rupture uterus; has to be inserted by physician and checked periodically; infections frequently occur; causes cramping and bleeding in some women	95% - 97%
I. Rhythm	No prescription needed; no physical risk	Period of ovulation cannot be counted on	60% - 80%
J. Withdrawal	No prescription needed; no physical risks	Unreliable because depends on man taking responsibility not to ejaculate in vagina or near pubis or thighs	10% - 15%

INFORMATION SHEET

VIII. Menstrual cycle (Transparency 6)

(NOTE: The menstrual cycle is usually 28 days long.)

A. Days one through five--Usually menstruation occurs, and one of the many ova enclosed in a Graafian follicle begins to mature

B. Days five through thirteen--During this period of ovum maturation, the Graafian follicle produces estrogen under the control of the pituitary gland, and the endometrium repairs and begins to thicken

C. By day fourteen--Ovulation occurs; Graafian follicle ruptures, and ovum is released into the abdominal cavity; fringed end of fallopian tube brings ovum into tube where it is propelled to uterus

(NOTE: If fertilization occurs, the ovum is penetrated by a sperm usually midway through the fallopian tube.)

D. Days fifteen through twenty--Corpus luteum forms, secreting progesterone; endometrium thickens

(NOTE: If fertilization does not occur, the corpus luteum and its secretions diminish, the blood supply to the endometrium decreases, and the uterine capillaries begin to bleed as the endometrium sloughs off.)

E. Days twenty-one through twenty-eight--Hormone production decreases; endometrium shrinks

IX. Presumptive and positive signs of pregnancy

A. Presumptive signs

(NOTE: These are signs that probably mean pregnancy but could be caused by some other condition.)

1. Absence of period
2. Morning sickness
3. Frequent urination
4. Tenderness and fullness of breasts

B. Positive signs

1. Fetal heart sounds
2. Fetal movement felt by examiner
3. X-ray showing fetal skeleton

INFORMATION SHEET

X. Danger signals during pregnancy that should be reported to a physician

   A. Vaginal bleeding

      (NOTE: No matter how slight, bleeding should be reported.)

   B. Swelling of the face or fingers

   C. Severe continuous headache

   D. Dimness or blurring of vision

   E. Flashes of light or dots before the eyes

   F. Pain in the abdomen

   G. Persistent vomiting

   H. Chills and fever

   I. Sudden escape of fluid from the vagina

      (NOTE: If any of these symptoms are reported, immediate action should take place.)

XI. Terms associated with abortion

   A. Criminal abortion--Interruption of pregnancy without medical or legal justification

      (NOTE: The general public tends to think of a criminal abortion when they hear abortion mentioned. There are many conditions relating to the interruption of a pregnancy that are not illegal or criminal.)

   B. Threatened abortion--One in which bleeding, spotting or cramps occurs early in pregnancy

      (NOTE: In many cases the pregnancy can be saved with proper treatment.)

   C. Habitual abortion--Problem condition where a mother loses several pregnancies spontaneously

   D. Incomplete abortion--Condition in which parts of the pregnancy are retained and not expelled from the uterus

   E. Missed abortion--One in which the fetus has died but has not been expelled from the uterus

INFORMATION SHEET

F. Therapeutic abortion--Legal termination of a pregnancy by a physician

G. Miscarriage--Spontaneous expulsion of the fetus due to many various factors

(NOTE: Miscarriage is more of a lay term and more easily accepted by the public because it does not have the connotation of being caused or brought about illegally.)

XII. Physiological changes that occur during menopause

A. Production of estrogen diminishes when ovaries become scar tissue as they atrophy

B. Atrophy of the uterus, fallopian tubes, vagina, and vulva occurs because of lack of estrogen

(NOTE: Menopause may produce some temporarily disturbing effects such as irritability, "hot flashes," extreme excitability, or other minor disturbances of the nervous and digestive systems. As a rule the better a woman's state of health, the less traumatic this period will be.)

XIII. Common diseases, disorders, and surgical procedures relating to male and female reproductive systems

A. Cryptorchidism--Undescended testes into the scrotum

B. Inguinal hernia--Spermatic cord which has pushed through a weak place in the inguinal canal in the abdominal wall

(NOTE: This can be very dangerous if the hernia is not reduced.)

C. Orchitis--Inflammation of the testes

D. Prostatitis--Inflammation of the prostate gland

E. Phimosis--Tightness of the foreskin so that it cannot be drawn back from the glans

F. Gonorrhea--Venereal disease causing inflammation of the genital mucous membrane; transferable through sexual partners and may produce lasting effects on many body systems

(NOTE: The causative organism is *Neisseria gonnorrhoeae*.)

G. Syphilis--Venereal disease transmitted by sexual contact leading to many lesions with lasting effects on body systems

H. Venereal herpes--Persistent infection caused by the herpes simplex virus 2; transmitted by sexual contact

INFORMATION SHEET

I. Leukorrhea--Whitish vaginal discharge, usually a symptom of one of the groups of vaginitis

(NOTE: The usual causative organism is the Trichomonas.)

J. Amenorrhea--Absence of menstrual flow; may be symptomatic of hormone disorder or an abnormality of reproductive organs

K. Dysmenorrhea--Painful or difficult menstruation

L. Endometriosis--Condition in which tissue that resembles the mucous membrane of the uterus appears in various areas in the pelvic cavity

(NOTE: This tissue can become inflammed or grow onto other organs.)

M. Salpingitis--Inflammation of the fallopian tubes

N. Pelvic inflammatory disease--Infection of organs of female reproductive system (except uterus) by various organisms

O. Sterility--Condition occurring in both females and males resulting in inability to conceive

P. Mastitis--Inflammation of the mammary glands

Q. D & C (dilation and curettage)--Surgical procedure involving expansion of the cervix and scraping of the uterus

R. Hysterectomy--Removal of the uterus, either through the abdominal wall or through the vagina

(NOTE: A subtotal hysterectomy removes the uterus, leaving the cervix; a total hysterectomy removes the uterus, plus the cervix.)

S. Prostatectomy--Removal of all or part of the prostate gland

(NOTE: The prostate gland may be removed through the urethra [transurethral] or with incision into the perineum [perineal], or into the bladder [suprapubic].)

T. Mastectomy--Excision of the breast

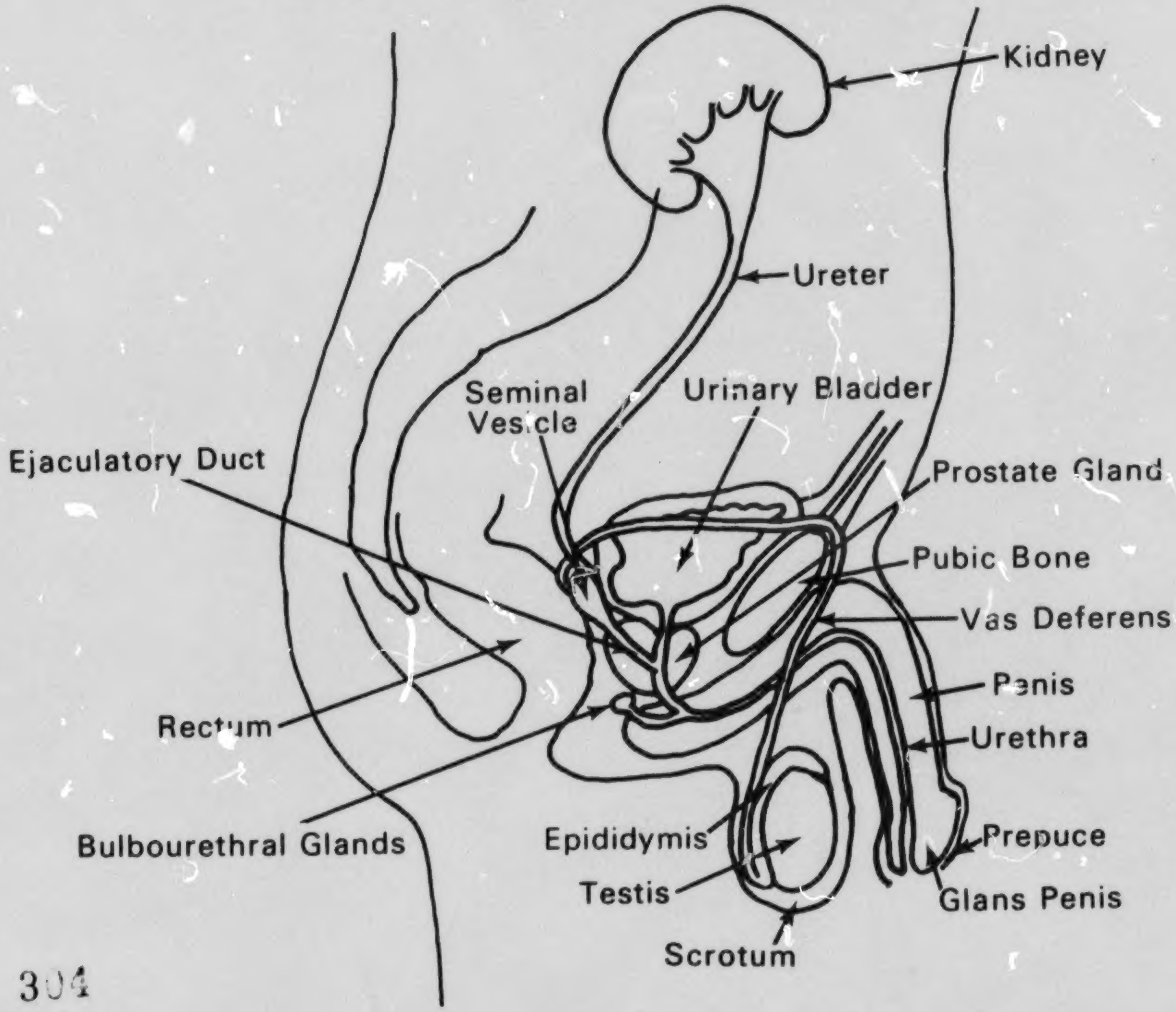
(NOTE: Removal of all of the breast tissue, plus muscle and lymph tissue is known as radical mastectomy and removal of only the breast tissue is known as simple mastectomy.)

U. Laparoscopy--Exploration of the abdomen using a lighted scope

V. Vulvectomy--Excision of the vulva

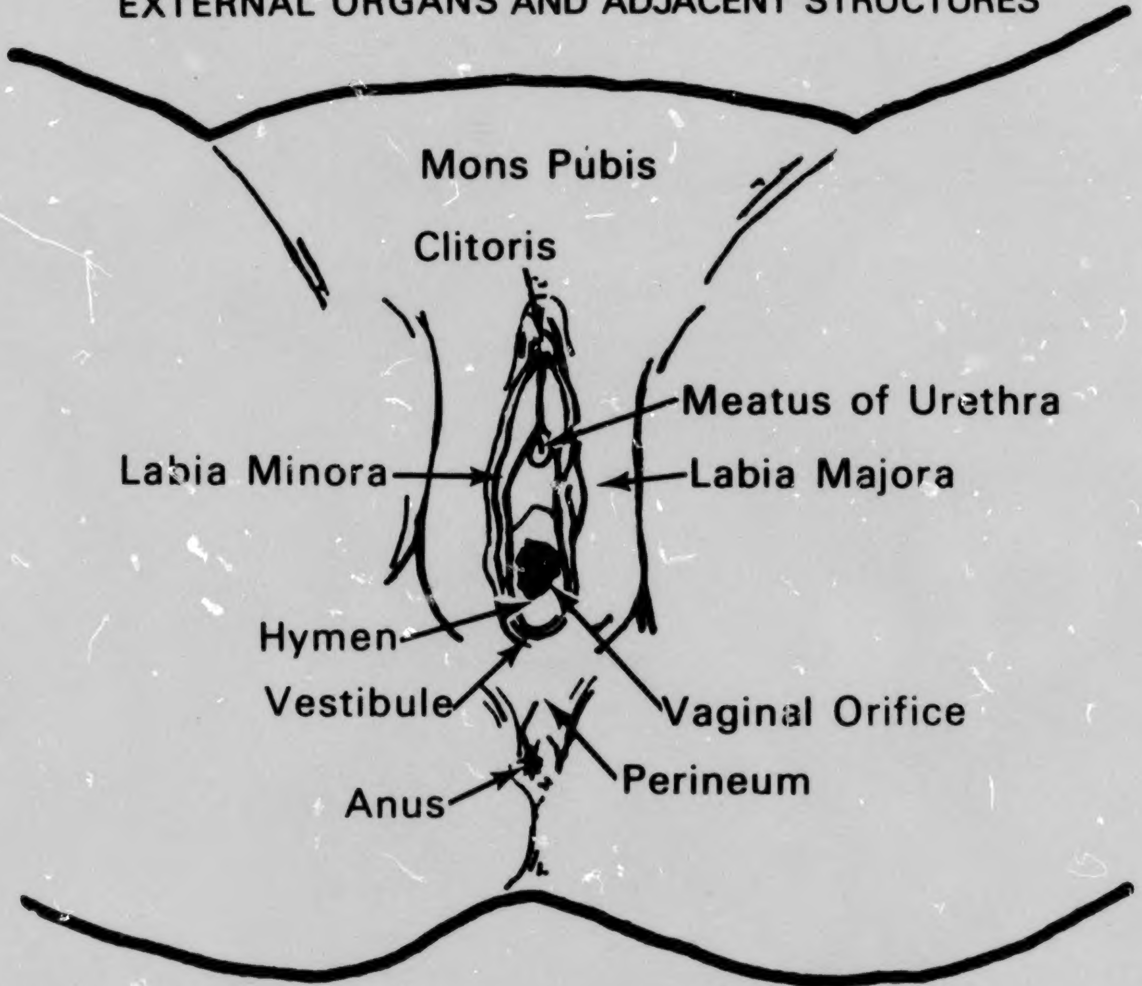
W. Orchidectomy--Surgical removal of a testicle

Male Reproductive System


Kidney
Ureter
Seminal Vesicle
Urinary Bladder
Ejaculatory Duct
Prostate Gland
Pubic Bone
Vas Deferens
Penis
Rectum
Urethra
Bulbourethral Glands
Epididymis
Prepuce
Testis
Glans Penis
Scrotum

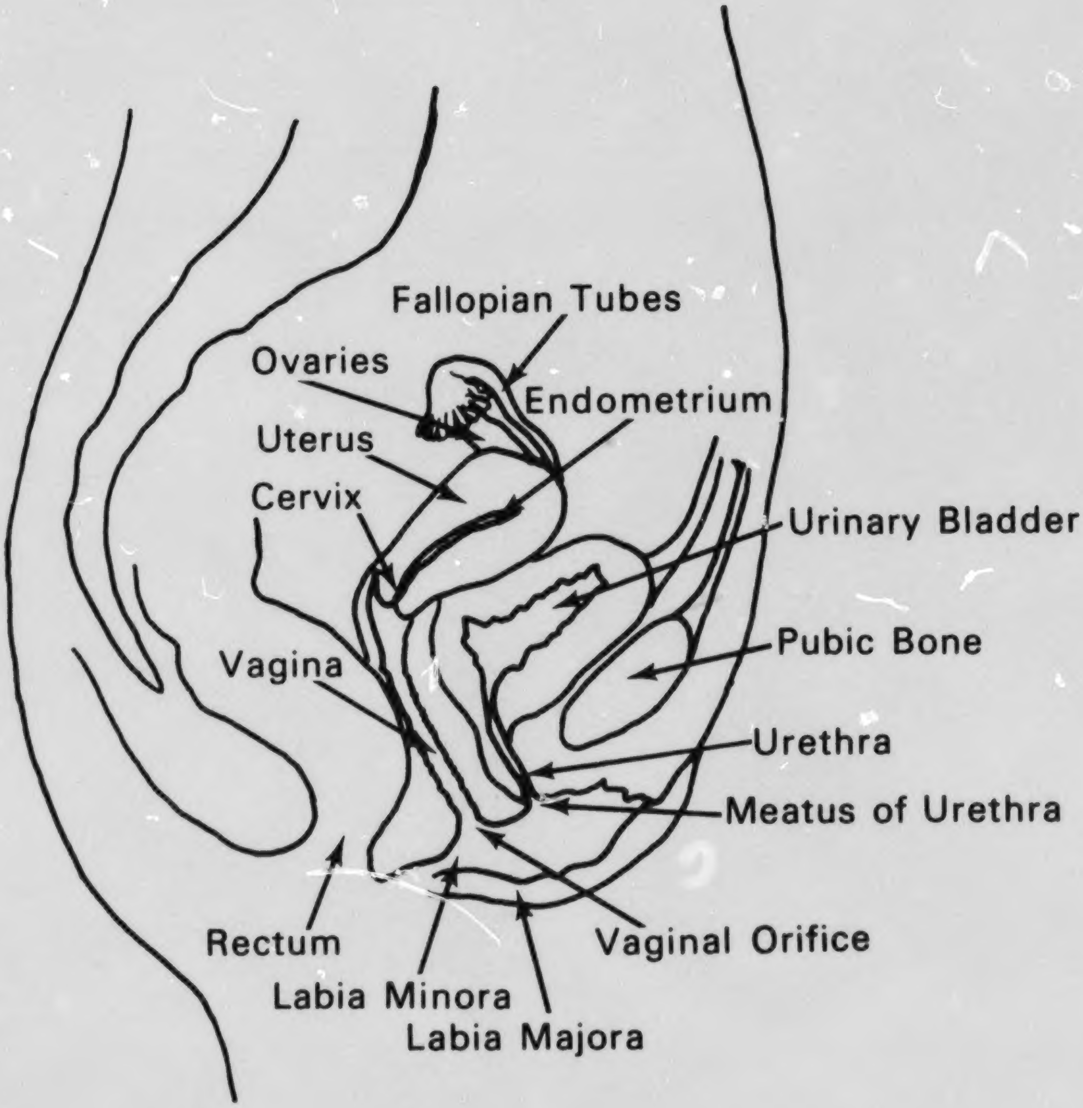
Female Reproductive System

EXTERNAL ORGANS AND ADJACENT STRUCTURES


Mons Pubis
Clitoris
Meatus of Urethra
Labia Minora
Labia Majora
Hymen
Vestibule
Vaginal Orifice
Perineum
Anus

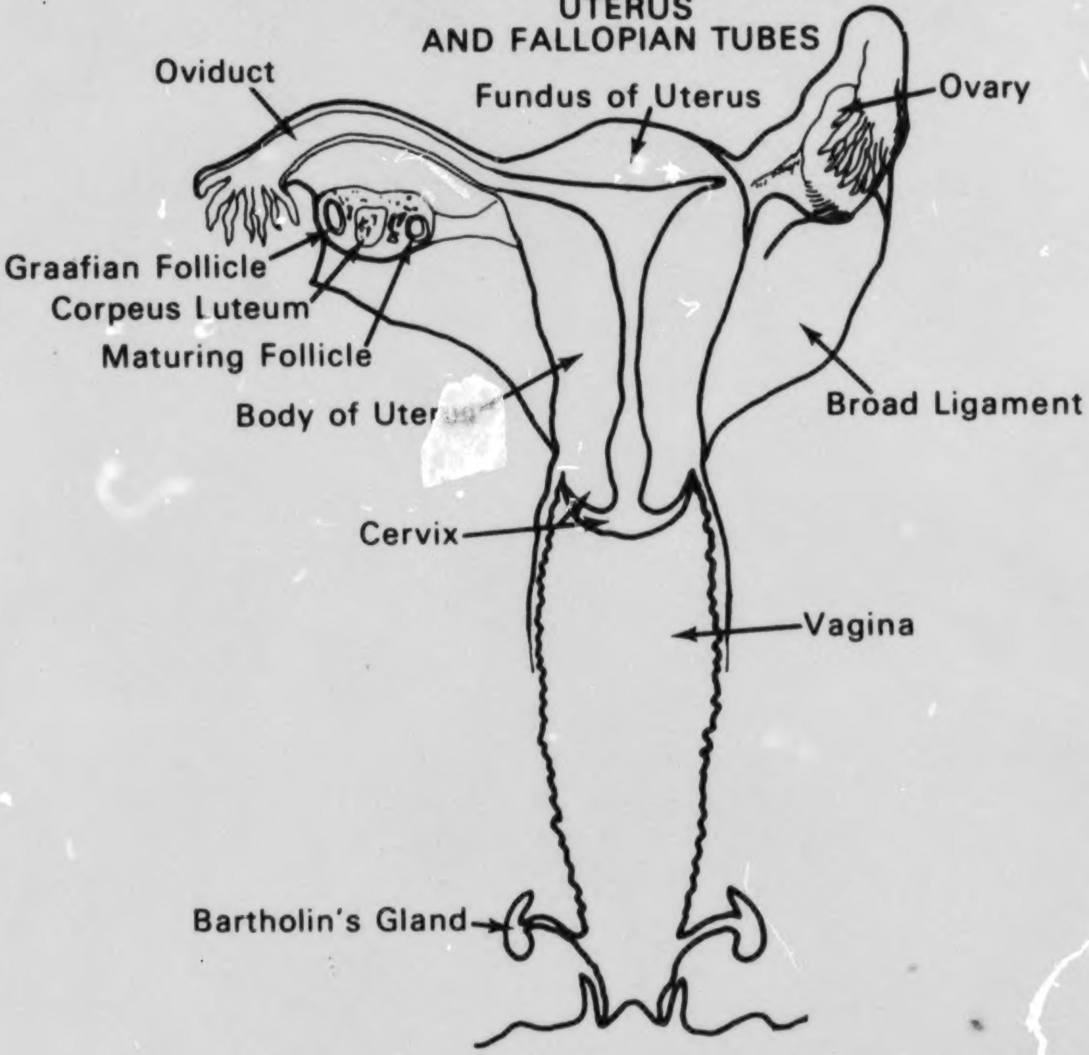
Female Reproductive System

INTERNAL ORGANS AND ADJACENT STRUCTURES


Fallopian Tubes
Ovaries
Endometrium
Uterus
Cervix
Urinary Bladder
Pubic Bone
Vagina
Urethra
Meatus of Urethra
Rectum
Vaginal Orifice
Labia Minora
Labia Majora

Female Reproductive System

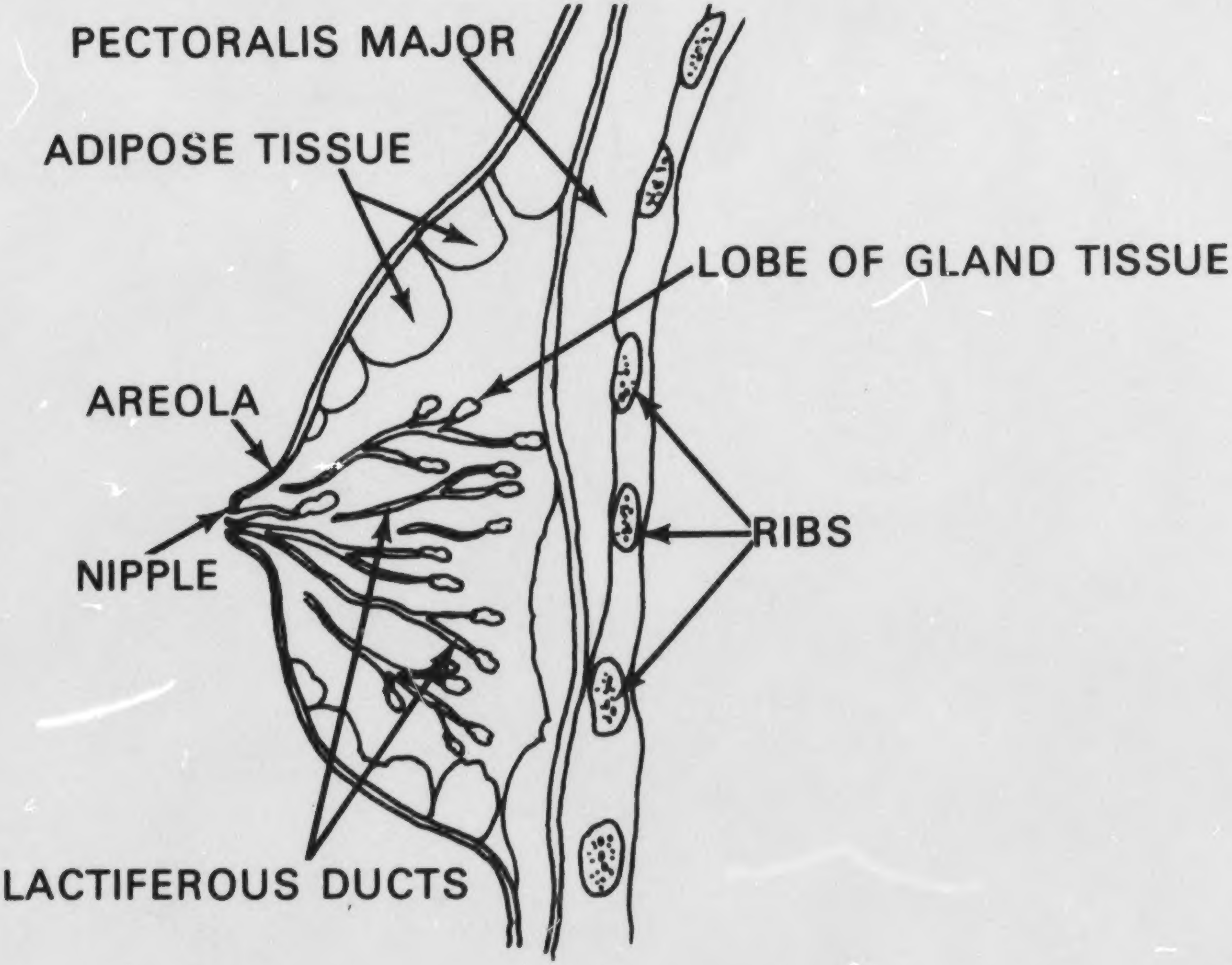
UTERUS
AND FALLOPIAN TUBES


Oviduct
Fundus of Uterus
Ovary
Graafian Follicle
Corpeus Luteum
Maturing Follicle
Body of Uterus
Broad Ligament
Cervix
Vagina
Bartholin's Gland

TM 4

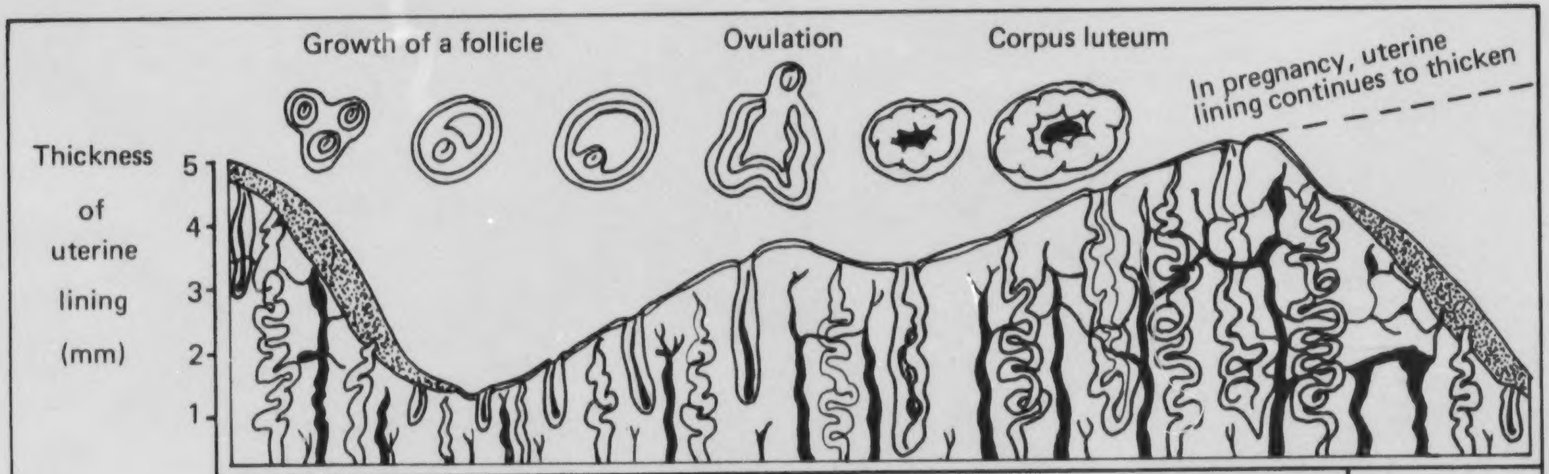
MA - 207-B

The Breast


PECTORALIS MAJOR
ADIPOSE TISSUE
LOBE OF GLAND TISSUE
AREOLA
NIPPLE
RIBS
LACTIFEROUS DUCTS

The Menstrual Cycle

•MENSTRUATION•OVULATION


Growth of a follicle
Ovulation
Corpus luteum
In pregnancy, uterine lining continues to thicken
Thickness of uterine lining (mm)
5
4
3
2
1

	Menstruation	Rebuilding of the uterine lining, coiled arteries and glands			Menstruation
Duration days	1 → 5	6 → 14	15 → 20	21 → 28	1 → 5

DAYS INDICATED ARE APPROXIMATE

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REPRODUCTIVE SYSTEM
UNIT V

ASSIGNMENT SHEET #1--REACT TO A CURRENT ISSUE DEALING WITH THE REPRODUCTIVE SYSTEM

NAME ______________________________ SCORE __________

Almost every day some form of media reports on new findings dealing with concerns of the reproductive system. New forms of birth control, issues dealing with abortion, and new research on cancer of this system are only a few of the issues discussed. As a medical assistant you will frequently be asked questions concerning these issues and should be prepared to react knowledgeably. Keeping current so that you can be up to date is very important. Using magazines, newspapers or pamphlets find an article that is of interest to you, clip it and fasten it to this sheet. From this article develop questions that could be asked by a patient. Share this information in a class discussion.

Example: Vaginal suppository for birth control

QUESTIONS:

1. Is it really safe to use this alone? ______________________________
2. How expensive is it? ______________________________
3. Has anyone had any side effects from it? ______________________________
4. What does Dr. X think of it? Has Dr. X recommended its use to anyone yet? __________
5. Do I need to come in and talk to Dr. X about using it? ______________________________

Your clipping:

ASSIGNMENT SHEET #1

Questions:

REPRODUCTIVE SYSTEM
UNIT V

JOB SHEET #1--ASSIST WITH A PELVIC EXAM AND PAP SMEAR

I. Equipment

A. Patient gown

B. Sheet or gown

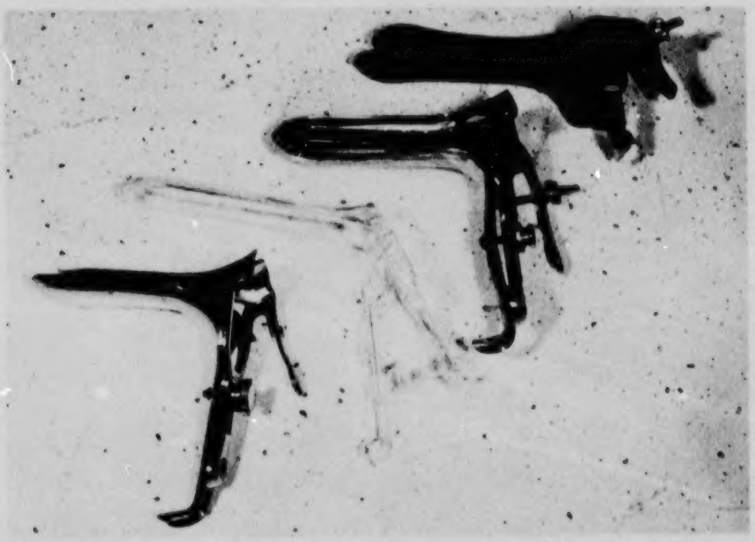
C. Exam light

D. Tray or stand for instruments

E. Speculum (Figure 1)

(NOTE: There are various sizes of metal and plastic speculums available. PLEASE choose the appropriate size for the patient being examined.)

FIGURE 1



F. Sterile exam glove

G. Lubricant

H. Slide (may use 2)

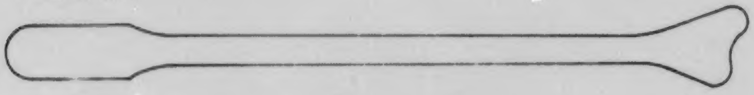
(NOTE: Specially marked and packaged slides may be used for this procedure. Become familiar with the type of slides your office uses.)

JOB SHEET #1

I. Sterile cotton swab

J. Wooden spatula (Figure 2)

FIGURE 2



K. Spray fixative

II. Procedure

A. Wash hands

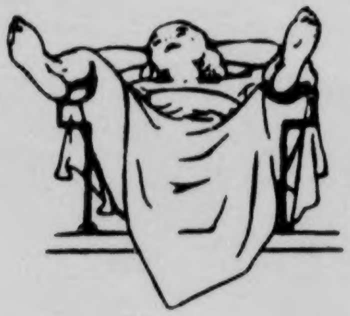
B. Set up room and make sure all equipment to be used in exam can be easily reached

(NOTE: Physician will determine what equipment he/she will use for each exam.)

D. Place exam light where it can be easily adjusted

E. Place patient in lithotomy position (Figure 3)

FIGURE 3



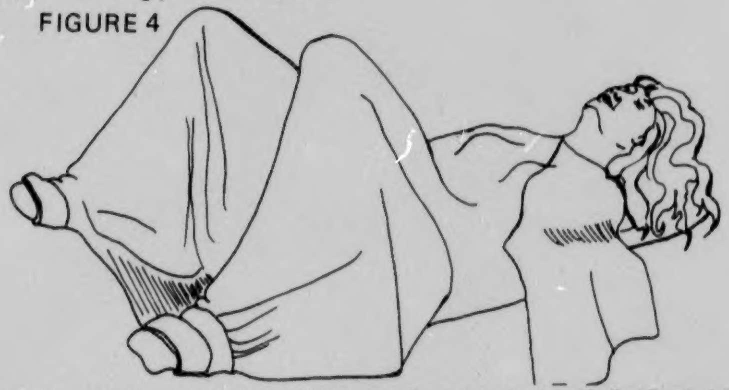
Adapted with permission of the Macmillan Company from *Textbook of the Principles and Practices of Nursing*, 5th ed., by Bertha Hammer and Virginia Henderson, copyright 1955, page 563.

JOB SHEET #1

F. Drape patient (Figure 4)

(NOTE: Schedule exam so that the patient will not have to assume this position for long period of time.)

FIGURE 4



Used with permission of J.B. Lippincott Company from *Introductory Medical-Surgical Nursing*, 2nd ed., by Jeanne C. Scherer, copyright 1977, page 515.

G. Make sure patient's record or chart is accessible to physician

(NOTE: The pelvic exam procedure will depend on the physician's preference. The usual order includes an examination of the outer genitalia, examination with the speculum and taking the pap smear, manually palpating the organs with a gloved hand, and finally a rectal exam. Be prepared to hand needed equipment as it is called for.)

H. Warm speculum to be used by running warm water over the tips

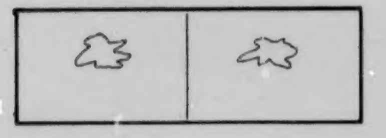
(NOTE: Some offices will have special warming trays for this purpose.)

I. Follow instructions according to what type of slides will be used for the pap smear

(NOTE: Make sure slides are marked showing whether tissue is taken from vaginal or cervical areas. See Figures 5 and 6.)

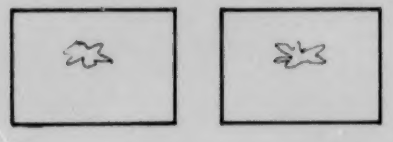
Example:

FIGURE 5



1 Slide

FIGURE 6



2 Slides

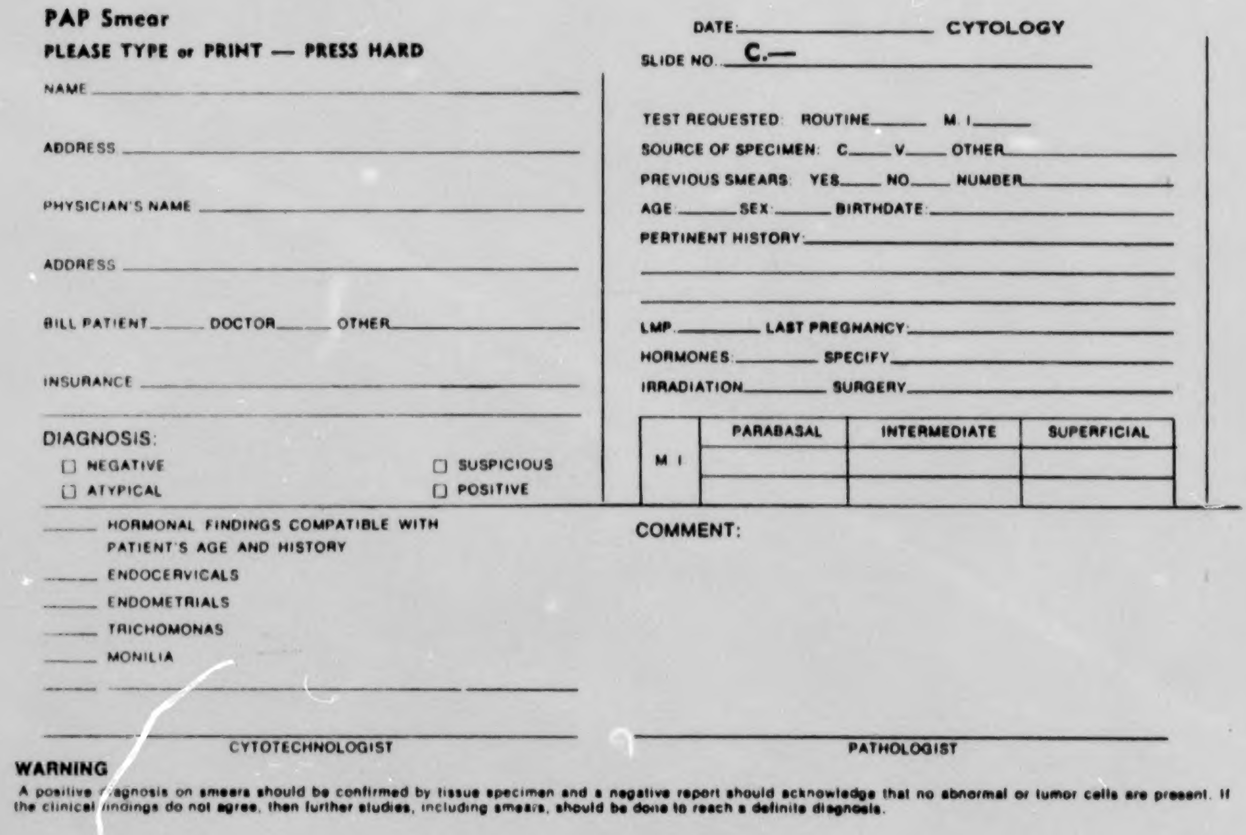
J. Spray fixative on slides

JOB SHEET #1

K. Fill out requisition slip to affix to slides (Figure 7)

Example:

FIGURE 7



PAP Smear

PLEASE TYPE or PRINT — PRESS HARD

NAME ______

ADDRESS ______

PHYSICIAN'S NAME ______

ADDRESS ______

BILL PATIENT ____ DOCTOR ____ OTHER ______

INSURANCE ______

DIAGNOSIS:

☐ NEGATIVE ☐ SUSPICIOUS

☐ ATYPICAL ☐ POSITIVE

DATE ______ CYTOLOGY

SLIDE NO. C.—

TEST REQUESTED: ROUTINE ____ M. I. ____

SOURCE OF SPECIMEN: C ____ V ____ OTHER ______

PREVIOUS SMEARS: YES ____ NO ____ NUMBER ______

AGE ____ SEX ____ BIRTHDATE ______

PERTINENT HISTORY ______

LMP ____ LAST PREGNANCY ______

HORMONES ____ SPECIFY ______

IRRADIATION ____ SURGERY ______

	PARABASAL	INTERMEDIATE	SUPERFICIAL
M I			

____ HORMONAL FINDINGS COMPATIBLE WITH PATIENT'S AGE AND HISTORY

____ ENDOCERVICALS

____ ENDOMETRIALS

____ TRICHOMONAS

____ MONILIA

COMMENT:

CYTOTECHNOLOGIST

PATHOLOGIST

WARNING

A positive diagnosis on smears should be confirmed by tissue specimen and a negative report should acknowledge that no abnormal or tumor cells are present. If the clinical findings do not agree, then further studies, including smears, should be done to reach a definite diagnosis.

(NOTE: There are other diagnostic tests that may be done at this time. If you are aware that these tests will take place, be prepared with equipment and ready to assist in the procedures.)

Example: Cervical biopsy, "hanging drop" for monilia smear, GC for gonorrhea

REPRODUCTIVE SYSTEM
UNIT V

JOB SHEET #2--TEACH SELF-EXAMINATION OF BREASTS

It is important for every woman to be familiar with examining her breasts each month. Cancerous tumors that are detected early can be treated with excellent results. The exam should take place during the time immediately after a menstrual period since the breasts usually have some changes in shape and texture right before the period and results can be misleading. Some physicians will include a breast exam as part of the yearly routine pelvic exam and pap smear. Many times the medical assistant will be asked to teach patients the steps of breast self-exams. Practice examining your own breasts at home, then roleplay teaching your classmates the steps to go through.

I. Equipment

   A. Mirror

   B. Small pillow or bath towel

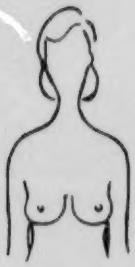
   C. Firm bed

II. Procedure

   (NOTE: Throughout this procedure you will be looking for any lumps or thickening of tissue.)

   A. Sit or stand in front of the mirror with arms relaxed at sides (Figure 1)

FIGURE 1



Used with permission of the American Cancer Society.

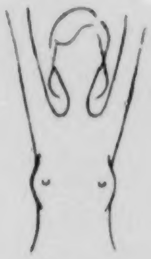
   B. Look carefully at your breasts to see any change in size or shape

   (NOTE: Be aware of any puckering or dimpling of tissue and any discharge that may come from the nipples.)

JOB SHEET #2

C. Raise both arms over your head and look again for the same characteristics (Figure 2)

FIGURE 2



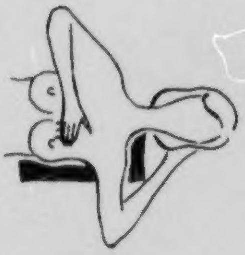
Used with permission of the American Cancer Society.

D. Lie down on the bed with a pillow or rolled bath towel under the left shoulder and put the left hand under your head

E. Press with the fingers of your right hand held together flat, gently but firmly with circular motions, to feel the inner, upper quarter of your left breast beginning at the breastbone, and going out toward the nipple line (Figure 3)

(NOTE: Also feel the area around the nipple.)

FIGURE 3



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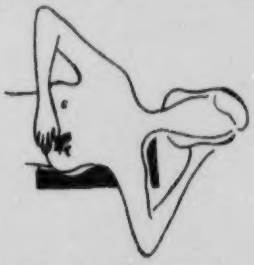
F. Feel the lower inner part of the breast next and do not be alarmed if you do feel a ridge of firm tissue, this is normal (Figure 4)

FIGURE 4



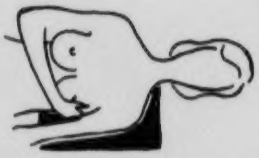
Used with permission of the American Cancer Society.

JOB SHEET #2

G. Remove your hand from beneath your head and bring it down to your side

H. Using the flat of your hand feel under your armpits (Figure 5)

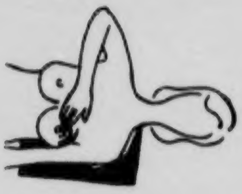
FIGURE 5



Used with permission of the American Cancer Society.

I. Continue to use the same motions to feel the upper, outer quarter of the breast from the nipple line to where the arm is resting (Figure 6)

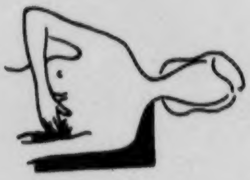
FIGURE 6



Used with permission of the American Cancer Society.

J. Feel the lower outer section of the breast going from the outer part to the nipple (Figure 7)

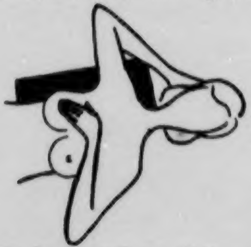
FIGURE 7



Used with permission of the American Cancer Society.

K. Repeat the entire procedure for the right breast (Figure 8)

FIGURE 8



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REPRODUCTIVE SYSTEM
UNIT V

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with the reproductive system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Area between external genitalia and anus

_____b. Head of penis

_____c. Male reproductive cell

_____d. External female genitalia

_____e. Period at which one becomes capable of reproduction

_____f. Study of diseases of female reproductive system

_____g. Fold of skin over glans penis

_____h. Mucous membrane lining of the uterus

_____i. Fold of peritoneum that supports uterus

_____j. External pouch which contains testes

_____k. Thick, white secretions of male reproductive glands

_____l. Cord suspending the testes; composed of veins, arteries, lymphatics, nerves, and vas deferens

_____m. Beginning of menstruation

_____n. Female reproductive cell

_____o. Pertaining to os pubis, the anterior bone of the pelvis

_____p. Normal condition that results in permanent cessation of menstrual activity

_____q. Thin-walled cavity in the ovary enclosing a developing ovum

_____r. Thick, sticky

1. Gynecology
2. Semen
3. Puberty
4. Scrotum
5. Spermatozoa
6. Pubic
7. Endometrium
8. Vulva
9. Perineum
10. Broad ligament
11. Menarche
12. Spermatic cord
13. Glans penis
14. Prepuce
15. Ovum
16. Menopause
17. Viscid
18. Graafian follicle

______s. Capable of maintaining an independent existence

______t. Surgical removal of prepuce

______u. Process by which sperm unites with ovum

______v. Process by which a living organism produces a new individual of the same kind

______w. Period that marks the cessation of reproductive function in female or diminishing testicular activity in the male

______x. Periodic discharge of blood and tissue from the nonpregnant uterus

______y. Branch of medicine that deals with management of pregnancy, labor, and post-partum

______z. Ducts that convey milk

19. Circumcision
20. Lactiferous ducts
21. Obstetrics
22. Menstruation
23. Viable
24. Climacteric
25. Fertilization
26. Reproduction

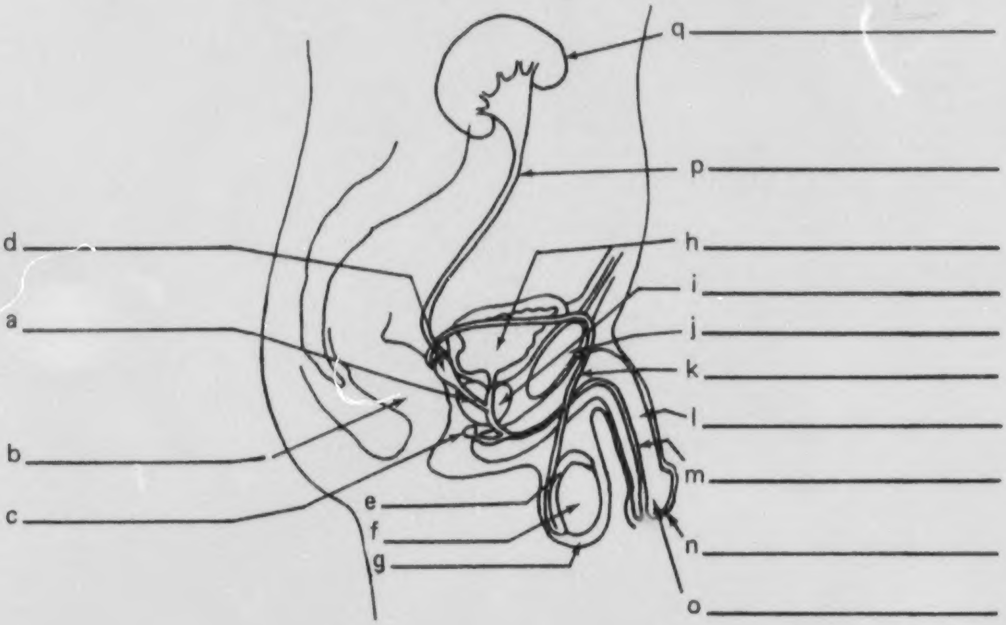
2. Name functions of the male and female reproductive systems.

a. ______________________________

b. ______________________________

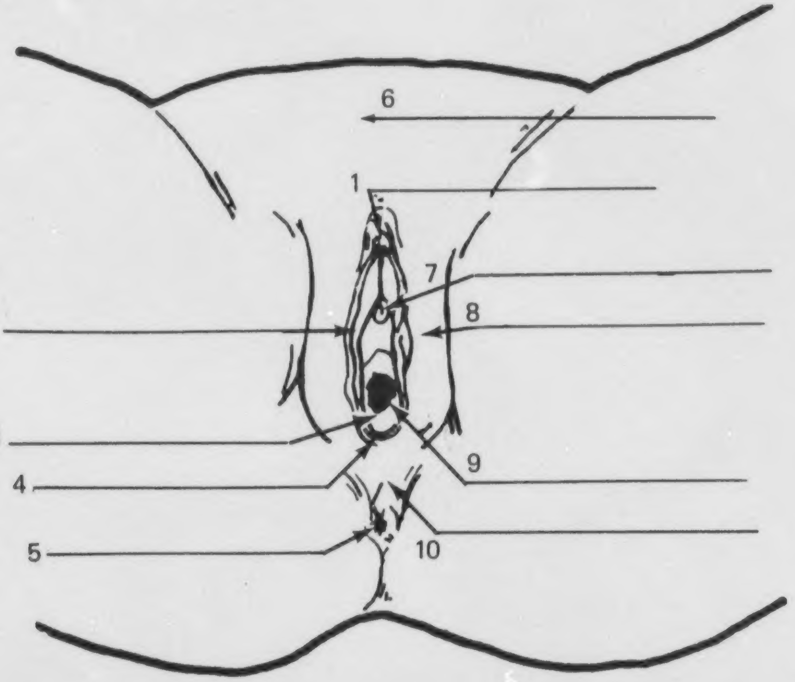
c. ______________________________

3. Identify parts and adjacent structures of the male reproductive system.

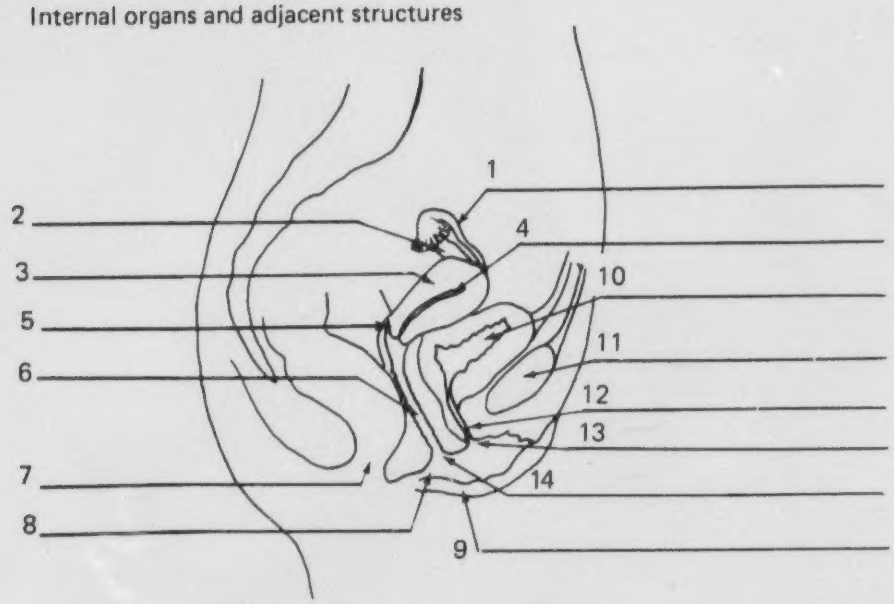


4. Identify parts of the female reproductive system.

a. External organs and adjacent structures


6
1
7
2
8
3
9
4
5
10

b. Internal organs and adjacent structures


1
2
4
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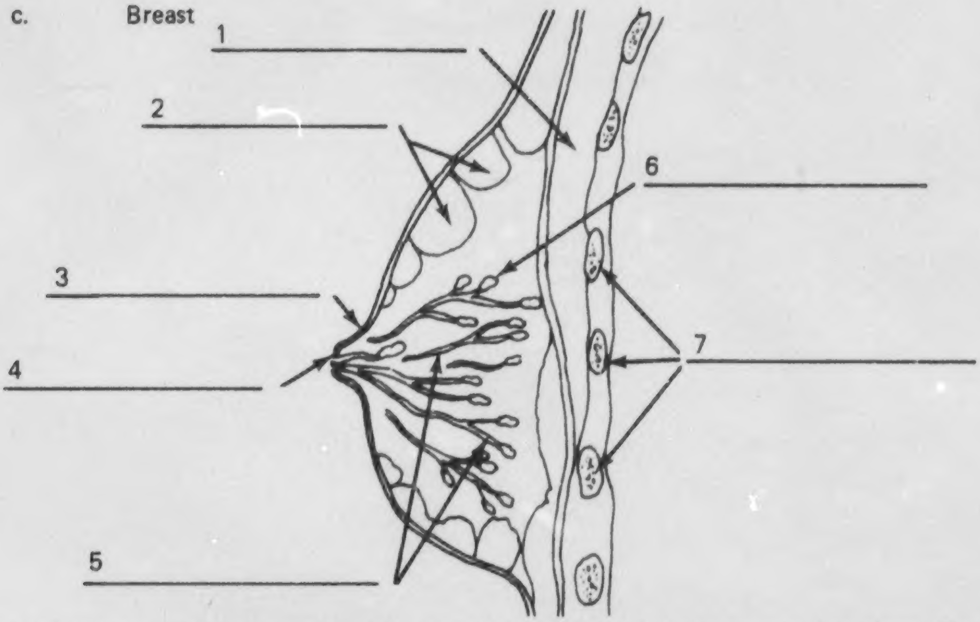
8
9

c. Breast



5. Match male external and internal reproductive organs to the correct functions. Place the correct numbers in the blanks provided.

External male organs

_____ a. Collects and stores sperm while maturing; conducts sperm to outside

_____ b. Carries semen into vagina during copulation; carries urine from bladder

_____ c. Produces sperm and testosterone

_____ d. Protects testes; regulates and maintains favorable temperature for sperm production

_____ e. Transports sperm from testes to urethra

1. Scrotum
2. Testes
3. Epididymis
4. Vas deferens
5. Penis and urethra

Internal male organs

_____ a. Transports sperm from testes to urethra

_____ b. Secrete viscid alkaline fluid which removes urine residue; secretes mucus for lubrication

_____ c. Contribute essential components to semen

_____ d. Secretes alkaline fluids which enhance sperm mobility; contracts smooth muscles to aid ejaculation

1. Seminal vesicles
2. Prostate gland
3. Bulbourethral or Cowper's glands
4. Vas deferens

6. Match external and internal female reproductive organs to the correct functions. Place the correct numbers in the blanks provided.

External female organs

_____a. Sexual excitation

_____b. Opening of vagina

_____c. Protection of pubic bone

_____d. Pelvic floor

_____e. Primary function is lactation (secretion of milk)

_____f. Regulation of urine flow

_____g. Enclose the vestibule

_____h. Surround labia minora

1. Mammary glands (breasts)
2. Mons pubis
3. Labia majora
4. Labia minora
5. Clitoris
6. Urethral orifice
7. Vaginal orifice
8. Perineum

Internal female organs

_____a. Menstruation; during pregnancy, protection and nourishment of fertilized ovum until it becomes a viable infant

_____b. Movement of ova from ovaries to uterus where fertilization usually takes place

_____c. Reception of penis during copulation; passageway for infant during birth

_____d. Production of hormones and an ovum, usually once a month from alternate sides

_____e. Secretion of lubricating fluid

1. Vagina
2. Uterus
3. Fallopian tubes (two)
4. Ovaries (two)
5. Bartholin's and Skene's glands

7. Complete the following chart on advantages, disadvantages, and effectiveness of types of birth control.

TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
Pill (NOTE: Many brands are on the market.)	a. ____________	May cause nausea, weight gain, breakthrough bleeding; increased incidence of vascular disease (NOTE: There has been much publicity about research findings concerning the possibility of tissue damage, causing cancer.)	99%-100%
Diaphragm with spermicidal jelly	Not a systemic drug; no physical risks	b. ____________	95% if used correctly with jelly
Foam (NOTE: There are many brands on today's market.)	Do not need prescription; easy to insert; no physical risk unless allergic to chemical	Must be scrupulous in cleaning applicator; must be inserted each time before intercourse	c. ____________
Vaginal Suppositories NOTE: There are many brands available on today's market.)	d. ____________	Must be inserted each time before intercourse; must comply with time limits to allow suppository to dissolve and the amount of time spermicide effect lasts (NOTE: Some women feel a heat sensation as the suppository dissolves.)	If used with a condom, 100%; without condom, 85-90% (if complying with all instructions)

TYPE	ADVANTAGES	DISADVANTAGES	EFFECTIVENESS
Condom (NOTE: Many different brands are available.)	Do not need prescription; no physical risks; reduces chance of contracting venereal disease	e. __________ __________ __________	If used with foam, 100%; without foam, 95%
Tubal ligation	Permanent (NOTE: There are times when this procedure can be reversed, but this is very infrequent.)	f. __________ __________ __________ __________ __________	100%
Vasectomy	Permanent (NOTE: There are times when this procedure can be reversed, but this is very infrequent.)	Surgical procedure, but can be done under local anesthesia may have some discomfort and swelling	g. __________ __________
IUD (Intra-uterine de-VICE) (NOTE: Many forms are available.)	Does not need to be inserted each time	h. __________ __________ __________ __________ __________ __________ __________	95% - 97%
Rhythm	i. __________ __________	Period of ovulation cannot be counted on	60% - 80%
Withdrawal	No prescription needed; no physical risks	Unreliable because depends on man taking responsibility not to ejaculate in vagina or near pubis or thighs	j. __________

8. Match the stages of the twenty-eight day menstrual cycle to the correct descriptions. Place the correct numbers in the blanks provided.

______a. Corpus luteum forms, secreting progesterone; endometrium thickens

______b. Hormone production decreases; endometrium shrinks

______c. Usually menstruation occurs and one of the many ova enclosed in a Graafian follicle begins to mature

______d. During this period of ovum maturation, the Graafian follicle produces estrogen under the control of the pituitary gland, and the endometrium repairs and begins to thicken

______e. Ovulation occurs; Graafian follicle ruptures, and ovum is released into the abdominal cavity; fringed end of fallopian tube brings ovum into tube where it is propelled to uterus

1. Days one through five
2. Days five through thirteen
3. By day fourteen
4. Days fifteen through twenty
5. Days twenty-one through twenty-eight

9. Distinguish between presumptive and positive signs of pregnancy. Place an "X" in the blanks before presumptive signs of pregnancy.

______a. Fetal heart sounds

______b. Frequent urination

______c. Morning sickness

______d. X-ray showing fetal skeleton

______e. Absence of period

______f. Fetal movement felt by examiner

______g. Tenderness and fullness of breasts

10. List danger signals during pregnancy that should be reported to physician.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

i. ______________________________

11. Match terms associated with abortion to the correct definitions. Place the correct numbers in the blanks provided.

______ a. Spontaneous expulsion of the fetus due to many various factors

______ b. Condition in which parts of the pregnancy are retained and not expelled from the uterus

______ c. One in which bleeding, spotting, or cramps occurs early in pregnancy

______ d. Interruption of pregnancy without medical or legal justification

______ e. One in which the fetus has died but has not been expelled from the uterus

______ f. Legal termination of a pregnancy by a physician

______ g. Problem condition where a mother loses several pregnancies spontaneously

1. Missed abortion
2. Therapeutic abortion
3. Threatened abortion
4. Criminal abortion
5. Miscarriage
6. Habitual abortion
7. Incomplete abortion

12. Discuss the physiological changes that occur during menopause.

____

____

____

13. Match common diseases, disorders, and surgical procedures relating to male and female reproductive systems to the correct definitions. Place the correct numbers in the blanks provided.

______ a. Painful or difficult menstruation

______ b. Inflammation of the mammary glands

______ c. Venereal disease transmitted by sexual contact leading to many lesions with lasting effects on body systems

______ d. Undescended testes into the scrotum

______ e. Absence of menstrual flow; may be symptomatic of hormone disorders or an abnormality of the reproductive organs

1. Dysmenorrhea
2. Amenorrhea
3. Syphilis
4. Cryptorchidism
5. Mastitis

______f. Inflammation of the fallopian tubes

______g. Infection of organs of female reproductive system (except uterus) by various organisms

______h. Tightness of the foreskin so that it cannot be drawn back from the glans

______i. Persistent infection caused by the herpes simplex virus 2; transmitted by sexual contact

______j. Condition occuring in both females and males resulting in inability to conceive

______k. Inflammation of the testes

______l. Spermatic cord which has pushed through a weak place in the inguinal canal in the abdominal wall

______m. Condition in which tissue that resembles the mucous membrane of the uterus appears in various areas in the pelvic cavity

______n. Venereal disease causing inflammation of the genital mucous membrane; transferable through sexual partners and may produce lasting effects on many body systems

______o. Inflammation of the prostate gland

______p. Whitish vaginal discharge, usually a symptom of one of the groups of vaginitis

______q. Exploration of the abdomen using a lighted scope

______r. Surgical removal of a testicle

______s. Excision of the breast

______t. Removal of all or part of the prostate gland

______u. Removal of the uterus either through the abdominal wall or through the vagina

______v. Surgical procedure involving expansion of the cervix and scraping of the uterus

______w. Excision of the vulva

6. Pelvic inflammatory disease
7. Venereal herpes
8. Phimosis
9. Endometriosis
10. Salpingitis
11. Gonorrhea
12. Sterility
13. Prostatitis
14. Orchitis
15. Inguinal hernia
16. Leukorrhea
17. Vulvectomy
18. Mastectomy
19. Hysterectomy
20. Orchidectomy
21. D & C
22. Prostatectomy
23. Laparoscopy

14. React to a current issue dealing with the reproductive system.

15. Demonstrate the ability to:

    a. Assist with a pelvic exam and pap smear.

    b. Teach self-examination of breasts.

    (NOTE: If activities 14 and 15 have not been finished before the test, ask your instructor when they should be completed.)

REPRODUCTIVE SYSTEM
UNIT V

ANSWERS TO TEST

1. a. 9
   b. 13
   c. 5
   d. 8
   e. 3
   f. 1
   g. 14
   h. 7
   i. 10
   j. 4
   k. 2
   l. 12
   m. 11
   n. 15
   o. 6
   p. 16
   q. 18
   r. 17
   s. 23
   t. 19
   u. 25
   v. 26
   w. 24
   x. 22
   y. 21
   z. 20
2. a. Perpetuation of the human species
   b. Sexual gratification
   c. Secretion of hormones
3. a. Ejaculatory duct
   b. Rectum
   c. Bulbourethral glands
   d. Seminal vesicle
   e. Epididymis
   f. Testis
   g. Scrotum
   h. Urinary bladder
   i. Prostate gland
   j. Pubic bone
   k. Vas deferens
   l. Penis
   m. Urethra
   n. Prepuce
   o. Glans penis
   p. Ureter
   q. Kidney

4. a. External organs and adjacent structures

    1) Clitoris
    2) Labia minora
    3) Hymen
    4) Vestibule
    5) Anus
    6) Mons pubis
    7) Meatus of urethra
    8) Labia majora
    9) Vaginal orifice
    10) Perineum

   b. Internal organs and adjacent structures

    1) Fallopian tubes
    2) Ovaries
    3) Uterus
    4) Endometrium
    5) Cervix
    6) Vagina
    7) Rectum
    8) Labia minora
    9) Labia majora
    10) Urinary bladder
    11) Pubic bone
    12) Urethra
    13) Meatus of urethra
    14) Vaginal orifice

c. Breast

1) Pectoralis major
2) Adipose tissue
3) Areola
4) Nipple
5) Lactiferious ducts
6) Lobe of gland tissue
7) Ribs

5. External male organs

a. 3
b. 5
c. 2
d. 1
e. 4

Internal Male Organs

a. 4
b. 3
c. 1
d. 2

6. External Female Organs

a. 5
b. 7
c. 2
d. 8
e. 1
f. 6
g. 4
h. 3

Internal Female Organs

a. 2

b. 3

c 1

d. 4

e. 5

7. a. Easy to take; periods usually shorter with less flow

b. Must be fitted by a doctor and checked periodically; must be inserted each time before intercourse and left in six to eight hours afterward; must be scupulous in cleaning and storing

c. If used with a condom, 100%; without condom 70-85%

d. No prescription needed; easy to insert; no physical risk unless allergic to chemical

e. Male must take responsibility; lack of sensitivity; must be applied prior to intercourse

f. Surgical procedure under general anesthesia, with post-operative discomforts; permanent sterilization

g. 100%

h. May rupture uterus; has to be inserted by physician and checked periodically; infections frequently occur; causes cramping and bleeding in some women

i. No prescription needed; no physical risks

j. 10-15%

8. a. 4

b. 5

c. 1

d. 2

e. 3

9. b, c, e, g

10. a. Vaginal bleeding

b. Swelling of the face or fingers

c. Severe continuous headache

d. Dimness or blurring of vision

e. Flashes of light or dots before the eyes

f. Pain in the abdomen

g. Persistent vomiting

h. Chills and fever

i. Sudden escape of fluid from vagina

11. a. 5

b. 7

c. 3

d. 4

e. 1

f. 2

g. 6

12. Discussion should include:

a. Production of estrogen diminishes when ovaries become scar tissue as they atrophy

b. Atrophy of the uterus, fallopian tubes, vagina, and vulva occurs because of lack of estrogen

13. a. 1

b. 5

c. 3

d. 4

e. 2

f. 10

g. 6

h. 8

i. 7

j. 12

k. 14

l. 15

m. 9

n. 11

o. 13

p. 16

q. 23

r. 20

s. 18

t. 22

u. 19

v. 21

w. 17

14. Evaluated to the satisfaction of the instructor

15. Performance skills evaluated to the satisfaction of the instructor

URINARY SYSTEM
UNIT VI

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the urinary system to assist patients in keeping the system healthy and to provide better care and treatment when diseases attack organs. The student should also be able to collect a mid-stream or clean catch urine specimen. This knowledge will be evidenced through completion of the job sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the urinary system to the correct definitions.
2. Identify structures of the urinary system.
3. Name main functions of the urinary system.
4. Distinguish between characteristics of the male and female urethra.
5. Distinguish between normal and abnormal components of urine.
6. Describe characteristics of normal urine.
7. State ways to maintain a healthy urinary system.
8. Match common diseases, disorders, and procedures related to the urinary system to the correct definitions.
9. Demonstrate the ability to collect a clean catch or mid-stream urine specimen.

URINARY SYSTEM
UNIT VI

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information sheet.

   C. Make transparency.

   D. Discuss unit and specific objectives.

   E. Discuss information and assignment sheets.

   F. Invite resource persons to visit class to speak on urological disorders, diseases, and treatment.

   G. Dissect animal kidney for inspection of structures.

   H. Demonstrate and discuss procedures outlined in job sheets.

   I. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency master: TM 1--The Urinary System

   D. Job Sheet #1--Collect Clean Catch or Mid-Stream Urine Specimen

   E. Test

   F. Answers to test

III. Unit references:

   A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

   B. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

IV. Film--"Kidneys." Color, 22 minutes. Films Incorporated, 1972. Available from Films Incorporated, 1144 Wilmette Ave., Wilmette, Illinois 60691.

(NOTE: This film is available on a free-loan basis to Oklahoma teachers only from the Oklahoma State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 W. 6th, Stillwater, Oklahoma 74074. Out-of-state teachers may order from the above address.)

V. Filmstrips:

1. "The Urinary Tract Problem." Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.
2. "When Kidneys Fail." Trainex Corporation.

URINARY SYSTEM
UNIT VI

INFORMATION SHEET

I. Terms and definitions

A. Adrenal--Near the kidney

(NOTE: The gland that curves over the kidney is known as the adrenal gland.)

B. Elimination--Discharge of indigestible materials and waste products of metabolism from the body

C. Excretion--Removing waste products of cell metabolism from the blood and lymph glands

D. Hepatic--Pertaining to the liver

E. Micturation--To urinate or void

F. Nephrology--Study of the kidney

(NOTE: *Nephro* means kidney.)

G. Nephron--Basic functional unit of kidneys that acts as a filtering unit for circulatory system

H. Renal--Pertaining to the kidney

I. Renal dialysis--Purification of blood in order to remove liquid and chemicals that the kidneys would remove from system if functioning normally

J. Secretion--Process of giving off a specific product as a result of gland activity

K. Ureter--Tube which carries urine from kidney to bladder

L. Urethra--Tube which carries urine from bladder to outside of body

M. Urinary meatus--External opening of urethra

N. Urology--Study of the urinary system

O. Vascular--Pertaining to or composed of blood vessels

II. Structures of the urinary system (Transparency 1)

A. Adrenal gland

B. Kidney

C. Renal artery

INFORMATION SHEET

D. Renal vein

E. Ureter

F. Urinary bladder

G. Prostate gland

(NOTE: This gland is found only in the male.)

H. Urethra

III. Main functions of urinary system

A. Filtration and excretion of waste products

(NOTE: Urine is composed mainly of water, salts, and waste products containing nitrogen.)

B. Assistance in maintaining the body's water balance

C. Regulation of body's acid-base balance

IV. Characteristics of the male and female urethra

(NOTE: In both the male and female, the meatus is controlled by a voluntary sphincter.)

A. Male

1. Part of both reproductive and urinary systems

2. Length of approximately 20 cm (8 in) in adult

3. Passage through prostate gland, where two ducts from reproductive glands join it, and through penis to outside

B. Female

1. Thin-walled, relatively short tube approximately 4 cm (1.7 in) long

2. Embedded in anterior muscle wall of vagina

V. Normal and abnormal components of urine

A. Normal

1. Water (95 percent)

INFORMATION SHEET

2. Protein waste products

   Examples: Urea, uric acid, creatinine

   (NOTE: When kidney function is impaired, waste products may accumulate in the blood. This is called uremia.)

3. Mineral salts

   Examples: Sodium chloride, sulfates, phosphate

4. Yellow pigment from certain bile compounds

5. Toxins

6. Hormones

B. Abnormal

1. Glucose
2. Albumin
3. Blood
4. Pus cells
5. Acetone
6. Casts

VI. Characteristics of urine

A. Total volume in 24 hours--1500 cc (approximately)

B. Color--Straw

C. Appearance--Clear

D. Odor--Mild, aromatic

(NOTE: After standing, urine begins to smell of ammonia.)

E. Reaction (pH)--6.0: slightly acid

F. Specific gravity--1.015 to 1.025

(NOTE: This is a little heavier than distilled water.)

INFORMATION SHEET

VII. Ways to maintain a healthy urinary system

- A. Adequate diet, including basic four food groups daily
- B. Sufficient daily intake of water for optimum function

  (NOTE: The average adult requires six to eight glasses of water daily.)
- C. Avoidance of drugs or other substances that may damage kidneys
- D. Cleanliness to avoid urinary tract infections in self and others

  Examples:
  1. Thorough handwashing before preparing or handling foods or materials to be given by intravenous or intramuscular injections
  2. Thorough handwashing after using the toilet
  3. Bathing as necessary for bodily cleanliness

     (NOTE: The urethral meatus in the female is exposed to vaginal, uterine, and rectal discharges throughout life; this subjects the delicate urethral structures to irritation and bacterial invasion.)
  4. Following use of toilet, females should cleanse from front to back
- E. Prompt medical treatment of urinary tract infection
- F. Proper care and handling of foods

  (NOTE: Several of the bacteria which cause gastrointestinal infections may also cause infection of the genitourinary tract.)

VIII. Common diseases, disorders, and procedures related to the urinary system

- A. Renal calculus--Kidney stone
- B. Albuminuria--Presence of albumin in urine
- C. Hematuria--Presence of blood in urine
- D. Glycosuria--Presence of glucose in urine
- E. Dysuria--Painful urination
- F. Pyuria--Presence of pus in urine
- G. Acetonuria--Presence of acetone in urine
- H. Nephritis--Inflammation of kidney tissue

INFORMATION SHEET

I. Uremia--Accumulation of urinary constituents in blood

J. Nephrosis--Degeneration of epithelial cells of coiled tubes of kidney

(NOTE: Nephrosis can be caused from poisons such as mercury or arsenic.)

K. Pyelitis--Inflammation of renal basin

L. Cystitis--Inflammation of bladder

M. Intravenous pyelogram (IVP)--Radiopaque dye is injected into vein and excreted through kidneys while X-ray films are taken of renal system

(CAUTION: Allergic reactions have occured when this dye is given and the MA who is preparing the patient for this test should be aware of other allergies present.)

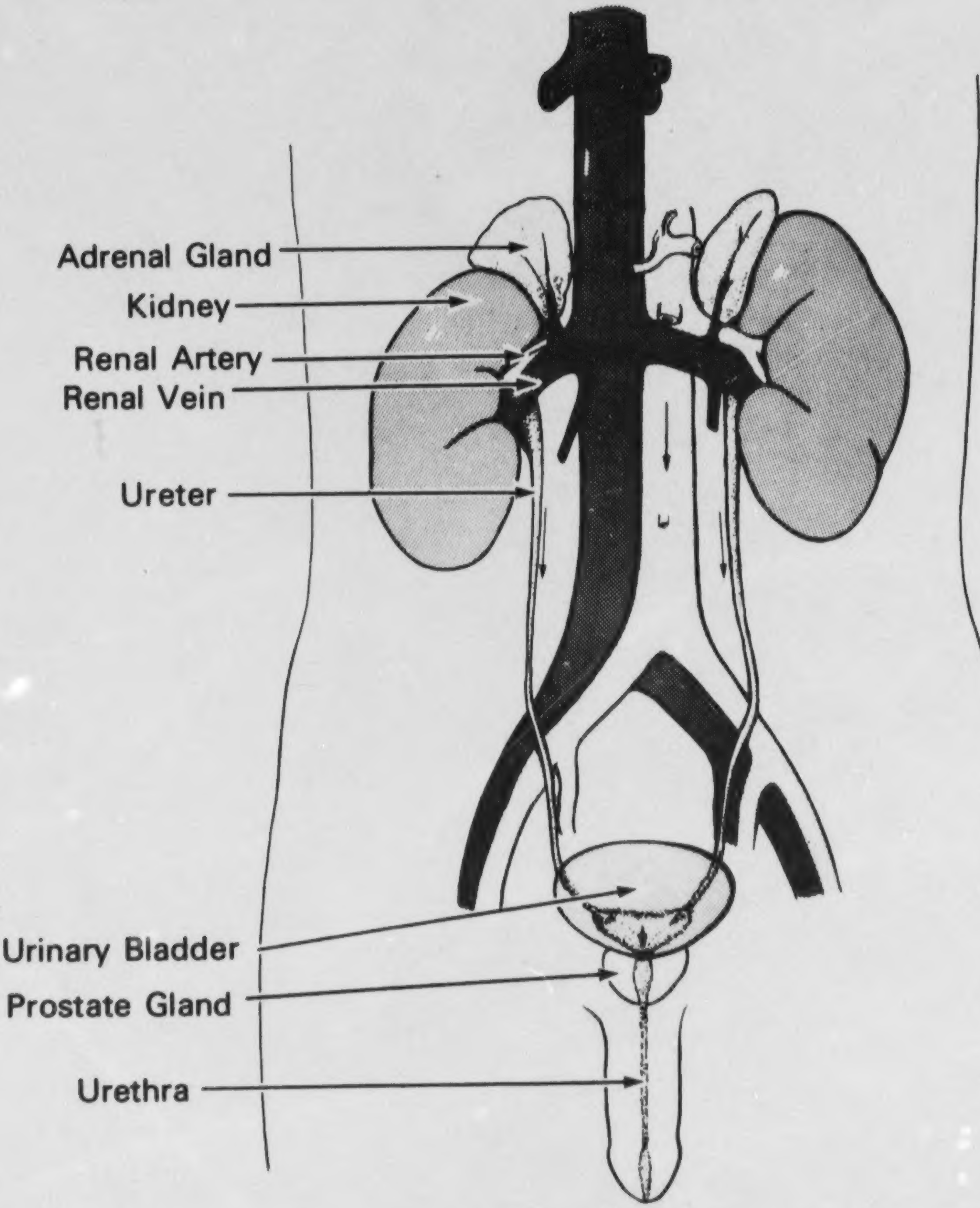
N. Cystoscopy--Examination of the bladder with a light-scope instrument

O. Catheterization--Use of an elastic, plastic, metal, or rubber tube to drain or inject fluids from or into body organs

(NOTE: Urinary catheterization is a very sterile process using sterile prepackaged kits. Learn the contents of your offices kits and be prepared to set up a set.)

P. Nephrectomy--Removal of a kidney

The Urinary System


Adrenal Gland
Kidney
Renal Artery
Renal Vein
Ureter
Urinary Bladder
Prostate Gland
Urethra

URINARY SYSTEM
UNIT VI

JOB SHEET #1--COLLECT A CLEAN CATCH OR MID-STREAM URINE SPECIMEN

(NOTE: The MA is usually responsible for explaining to the patient the steps to follow to obtain a urine specimen.)

I. Equipment

  A. Covered sterile specimen container

  (NOTE: Pre-packaged sterile specimen containers are available from many different companies, so follow manufacturer's instructions.)

  B. Cleansing solution

  (NOTE: Sterile pads with solution are usually packaged with container.)

  C. Label

  D. Requisition form

II. Procedure for females

  A. Wash hands

  B. Fill out label and laboratory requisition

  C. Identify patient and explain procedure

    1. Give the pads to her and explain that she should spread the labia, cleanse one side, then the other side, and then down the middle, always using a front-to-back motion

    2. Explain that while still holding the labia apart she should begin voiding, stop, then begin voiding again, catching the stream in the specimen container

    3. Have patient cap bottle, and give it back to the MA

  D. Take specimen directly to laboratory

  E. Perform laboratory tests as indicated, or place in a safe place with requisition attached until time to take it to another laboratory where more specific tests may be done

  F. Wash hands

JOB SHEET #1

III. Procedure for males

- A. Wash hands
- B. Fill out label and laboratory requisition
- C. Identify patient and explain procedure
  1. Give the pads to him and explain that the urinary opening (meatus) should be cleansed using a circular motion
  2. Explain to him that he should begin voiding, stop, then begin the urinary stream, collecting it in the specimen container
  3. Have patient cap bottle and give it back to the MA
- D. Take specimen directly to laboratory
- E. Perform laboratory tests as indicated, or place in a safe place with requisition attached until time to take to another laboratory where more specific tests may be done
- F. Wash hands

MA - 255-B

URINARY SYSTEM
UNIT VI

TEST

NAME ______________________________ SCORE ________________

1. Match terms associated with the urinary system to the correct definitions. Place the correct numbers in the blanks provided.

______ a. Tube which carries urine from kidney to bladder

______ b. Pertaining to or composed of blood vessels

______ c. Study of the kidney

______ d. To urinate or void

______ e. Study of the urinary system

______ f. Tube which carries urine from bladder to outside of body

______ g. Discharge of indigestible materials and waste products of metabolism from the body

______ h. Process of giving off a specific product as a result of gland activity

______ i. External opening of urethra

______ j. Removing waste products of cell metabolism from the blood and lymph glands

______ k. Basic functional unit of kidneys that acts as a filtering unit for circulatory system

______ l. Pertaining to the liver

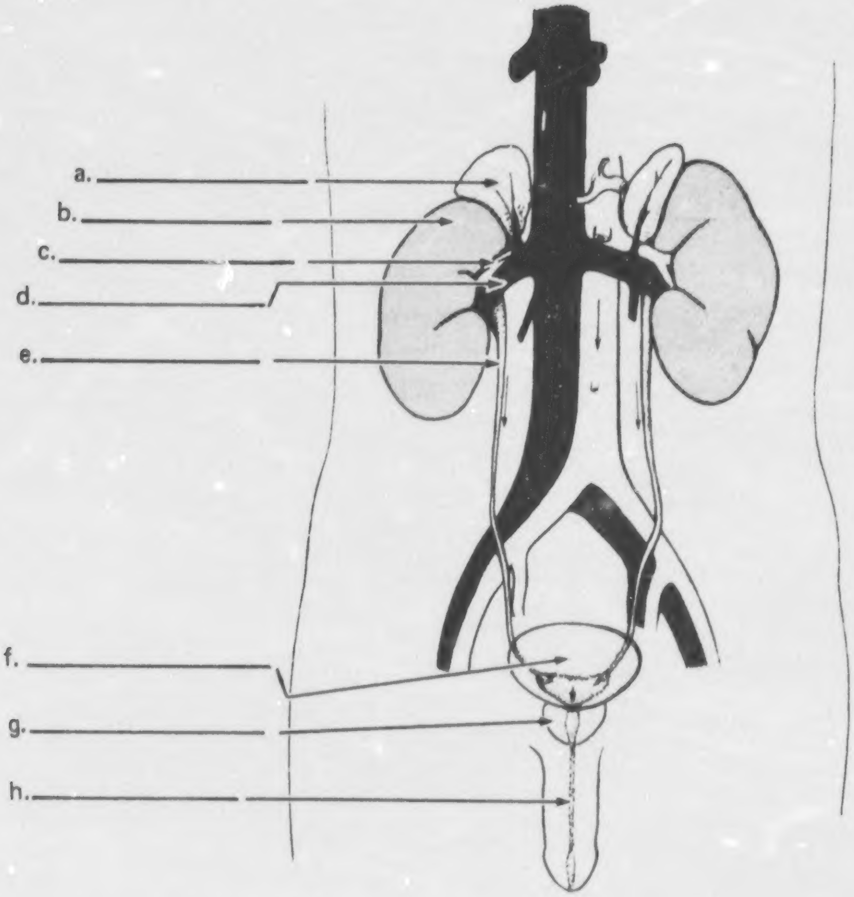
______ m. Near the kidney

______ n. Pertaining to the kidney

______ o. Purification of blood in order to remove liquid and chemicals that kidneys would remove if functioning normally

1. Urology
2. Nephron
3. Vascular
4. Elimination
5. Excretion
6. Hepatic
7. Secretion
8. Nephrology
9. Urethra
10. Ureter
11. Micturation
12. Renal
13. Adrenal
14. Urinary meatus
15. Renal dialysis

2. Identify structures of the urinary system. Write the correct names in the blanks provided.



Adrenal gland
Kidney
Renal artery
Prostate gland
Ureter
Renal vein
Urethra
Urinary bladder

3. Name the main functions of the urinary system.

a.

b.

c.

4. Distinguish between characteristics of the male and female urethra. Place an "M" for characteristics of male urethra and an "F" for characteristics of female urethra in the blanks provided.

_____a. Length of approximately 20 cm (8 in) in adult

_____b. Thin-walled, relatively short tube approximately 4 cm (1.7 in) long

_____c. Part of both reproductive and urinary system

_____d. Embedded in anterior muscle wall of vagina

_____e. Passage through prostate gland, where two ducts from reproductive glands join it, and through penis to outside

5. Distinguish between normal and abnormal components of urine. Place an "N" for normal components and an "A" for abnormal components in the blanks provided.

_____a. Water (95 percent)

_____b. Casts

_____c. Protein waste products

_____d. Hormones

_____e. Yellow pigment from certain bile compounds

_____f. Blood

_____g. Glucose

_____h. Albumin

_____i. Toxins

_____j. Pus cells

_____k. Mineral salts

_____l. Acetone

6. Describe characteristics of normal urine.

a. Total volume in 24 hours--_____________________________

b. Color--_____________________________

c. Appearance--_____________________________

d. Odor--_____________________________

e. Reaction (pH)--_____________________________

f. Specific gravity--_____________________________

7. State ways to maintain a healthy urinary system.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

8. Match common diseases, disorders, and procedures related to the urinary system to the correct definitions. Place the correct numbers in the blanks provided.

______a. Kidney stone

______b. Painful urination

______c. Presence of albumin in urine

______d. Presence of blood in urine

______e. Presence of glucose in urine

______f. Accumulation of urinary constituents in blood

______g. Presence of pus in urine

______h. Inflammation of bladder

______i. Inflammation of kidney tissue

______j. Degeneration of epithelial cells of coiled tubes of kidney

______k. Inflammation of renal basin

______l. Presence of acetone in urine

______m. Examination of the bladder with a light-scope instrument

______n. Use of an elastic, plastic, metal, or rubber tube to drain or inject fluids from or into body organs

______o. Removal of a kidney

______p. Radiopaque dye is injected into vein and excreted through kidneys while X-ray films are taken of renal system

1. Dysuria
2. Hematuria
3. Glycosuria
4. Albuminuria
5. Renal calculus
6. Cystitis
7. Uremia
8. Nephrosis
9. Pyelitis
10. Nephritis
11. Pyuria
12. Acetonuria
13. Catheterization
14. Cystoscopy
15. Intravenous pyelogram
16. Nephrectomy

9. Demonstrate the ability to collect a clean catch or mid-stream urine specimen.

   (NOTE: If the above activity has not been finished before the test, ask your instructor when it should be completed.)

URINARY SYSTEM
UNIT VI

ANSWERS TO TEST

1. a. 10
   b. 3
   c. 8
   d. 11
   e. 1
   f. 9
   g. 4
   h. 7
   i. 14
   j. 5
   k. 2
   l. 6
   m. 13
   n. 12
   o. 15
2. a. Adrenal gland
   b. Kidney
   c. Renal artery
   d. Renal vein
   e. Ureter
   f. Urinary bladder
   g. Prostate gland
   h. Urethra
3. a. Filtration and excretion of waste products
   b. Assistance in maintaining the body's water balance
   c. Regulation of body's acid-base balance
4. a. M
   b. F
   c. M
   d. F
   e. M

5. a. N
   b. A
   c. N
   d. N
   e. N
   f A
   g. A
   h. A
   i. N
   j. A
   k. N
   l. A

6. a. 1500 cc (approximately)
   b. Straw
   c. Clear
   d. Mild, aromatic
   e. 6.0: slightly acid
   f. 1.015 to 1.025

7. a. Adequate diet, including basic four food groups daily
   b. Sufficient daily intake of water for optimum function
   c. Avoidance of drugs or other substances that may damage kidneys
   d. Cleanliness to avoid urinary tract infections in self and others
   e. Prompt medical treatment of urinary tract infection
   f. Proper care and handling of foods

8. a. 5
   b. 1
   c. 4
   d. 2
   e. 3
   f. 7
   g. 11
   h. 6
   i. 10
   j. 8
   k. 9
   l. 12
   m. 14
   n. 13
   o. 16
   p. 15

9. Performance skill evaluated to the satisfaction of the instructor

MUSCULOSKELETAL SYSTEM
UNIT VII

UNIT OBJECTIVE

After completion of this unit, the student should be able to assist the physician in treatment and education of patients with problems concerning the musculoskeletal system. The student should also be able to apply principles of good body mechanics to protect self and patients from harm. This knowledge will be evidenced through completion of the assignment sheet, job sheet, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the muscular system to the correct definitions.
2. Match terms associated with the skeletal system to the correct definitions.
3. Distinguish between major functions of muscles and bones.
4. Match types of muscles to their correct actions.
5. Match characteristics of muscle tissue to the correct descriptions.
6. Identify principal muscles.
7. State ways to maintain the muscular system.
8. Distinguish between types of bones.
9. Distinguish between divisions of the skeleton.
10. Identify bones of the skull.
11. Select from a list sinuses found in the skull.
12. Select from a list regions of the spinal column.
13. Identify bones of the body.
14. Identify parts of a long bone.
15. Select from a list ways to maintain the skeletal system.
16. Distinguish between types of joints according to type of movement.
17. Select from a list ways to move joints.

18. Match common diseases, disorders, and procedures related to the musculoskeletal system to the correct definitions.
19. Describe types of bone fractures.
20. Match terms associated with body mechanics to the correct definitions.
21. Select from a list reasons the medical assistant should use proper body mechanics.
22. State principles of body mechanics.
23. Select illustrations of correct body alignment when standing, sitting, or lifting.
24. Locate the sinuses in the skull.
25. Demonstrate the ability to apply principles of body mechanics.

MUSCULOSKELETAL SYSTEM
UNIT VII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Make transparencies.

  C. Provide students with information, assignment, and job sheets.

  D. Discuss unit and specific objectives.

  E. Discuss information and assignment sheets.

  F. Demonstrate and discuss procedures outlined in job sheets.

  G. Have students color in pictures of bones and muscles using a specific color for each area.

  Examples: Blue-long bones; Red-short bones; Yellow-irregular

  H. Invite resource person from exercise group to come in to show appropriate exercises to relieve back strain or promote good posture.

  I. Allow for return demonstrations.

  J. Invite an orthopedist to visit and speak on various treatments, such as surgery for musculoskeletal conditions.

  K. Invite a physical therapist to visit or take a field trip to a PT department.

  (NOTE: Ask them to demonstrate the types of equipment that might be seen in the office and let the student become familiar with assisting a patient with a walker, crutches, and in a wheelchair.)

  L. Obtain animal bones or use skeleton model to demonstrate articulation of joints.

  M. Give test.

  (NOTE: Test may be separated and given in parts if necessary.)

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

C. Transparency masters

1. TM 1--Muscles: Anterior View
2. TM 2--Muscles: Posterior View
3. TM 3--Skeleton of Head
4. TM 4--Skeleton of Head of Infant
5. TM 5--Regions of the Spinal Column
6. TM 6--Anterior View of the Skeleton
7. TM 7--Posterior View of the Skeleton
8. TM 8--Parts of a Long Bone
9. TM 9--Types of Joint Movement
10. TM 10--Types of Bone Fractures

D. Assignment Sheet #1--Locate the Sinuses in the Skull

E. Job Sheet #1--Apply Principles of Body Mechanics

F. Test

G. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers*. Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Thomas, Clayton L., M.D., ed. *Taber's Cyclopedic Medical Dictionary*. Philadelphia: F.A. Davis Company, 1977.

C. Memmler, Ruth, and Wood, Dena. *The Human Body in Health and Disease*. Philadelphia: J.B. Lippincott Company, 1977.

IV. Additional materials:

A. Films

1. "Our Wonderful Body: How it Moves." Color, 11 minutes, Coronet Films, 1968. Available from Coronet Films, Coronet Building, 63 East South Water Street, Chicago, Illinois 60601.

2. "I am Joe's Spine." Color, 26 minutes, Pyramid Films, 1973. Available from Pyramid Films, 2801 Colorado Avenue, Santa Monica, California 90404.

   (NOTE: These films are available on a free-loan basis to Oklahoma teachers *only* from the State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 West Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the addresses listed.)

B. Filmstrip--"Arthritis." Available from Trainex Corporation, P. O. Box 116, Garden Grove, California 92642.

MUSCULOSKELETAL SYSTEM
UNIT VII

INFORMATION SHEET

I. Terms and definitions associated with the muscular system

   A. Antagonist--Muscle which counteracts with a prime mover

   B. Atrophy--Wasting away

   C. Flaccid--Lacking muscle tone

   D. Intramuscular--Within a muscle

   E. Muscle fatigue--Loss of muscle's power to contract after prolonged periods of contraction

   F. Myology--Study of muscles

   G. Prime mover--Muscle primarily responsible for a specific action

   H. Skeletal muscles--Bundles of striated muscle tissue surrounded by connective tissue

   I. Tendon--Narrow strip of dense connective tissue that attaches muscle to a bone

   J. Tonus--Slight tension in the muscle which is always present, even when muscle is resting

      (NOTE: Continued active use of muscle causes it to increase in tone and size.)

II. Terms and definitions associated with the skeletal system

   A. Appendage--Anything attached to a larger part; a dependent part

      Examples: Arm, leg

   B. Appendicular--Pertaining to a limb or appendage

   C. Arthrology--Study of joints

   D. Articulation--Point where bones are joined together; a joint

   E. Axial--Pertaining to the central part; skeleton of head and trunk

   F. Cartilage--White elastic substance attached to bone surfaces at the joints

   G. Foramen--Hole or opening for passage of blood vessels, nerves, and ligaments

INFORMATION SHEET

H. Head--Rounded portion beyond narrow, neck-like portion of a long bone

I. Ligament--Tough, fibrous band binding together bones or supporting internal organs

J. Osteology--Study of bones

K. Sinus--Chamber or cavity in a bone

III. Major functions of muscles and bones

A. Muscles

1. Allow movement

(NOTE: This involves any movement, includng moving from place to place, movement of the pupil of the eye, and internal movement, such as blood pushing through the vessels.)

2. Result in heat and energy due to chemical reaction within the tissue

3. Dictate posture and body mechanics

4. Protect internal organs

B. Bones

1. Provide shape and support

2. Assist in body movement

3. Protect vital organs

4. Manufacture red blood cells, platelets, and some white cells

5. Store minerals such as calcium and phosphorus

IV. Types of muscles and their actions

A. Abductors--Move away from a part

B. Adductors--Move toward a part or to the midline

C. Levators--Lift a part

D. Depressors--Lower a part

E. Flexors--Bend a joint

F. Extensors--Straighten a joint

INFORMATION SHEET

G. Rotators--Revolve a part on its axis

H. Sphincters--Ring-like muscles that close body openings

V. Characteristics of muscle tissue

A. Contractility--Ability of a muscle to shorten and thicken when given proper stimulus

B. Elasticity--Ability of a muscle to return to its original length after stretching

C. Extensibility--Ability of a muscle to stretch

D. Irritability--Ability of a muscle to respond to stimulation

VI. Principal muscles and their location (Transparencies 1 and 2)

A. Sternocleidomastoid--Neck

B. Deltoid--Shoulder

C. Biceps brachii--Anterior upper arm

D. Triceps brachii--Posterior upper arm

E. Trapezius--Back

F. Latissimus dorsi--Back

G. Pectoralis major--Chest

H. External and internal oblique--Abdominal wall

I. Rectus abdominis--Abdominal wall

J. Gluteus maximus--Buttocks (upper area)

K. Gluteus medius--Buttocks (middle area)

L. Biceps femoris-- Posterior thigh

M. Tibialis anterior--Anterior lower leg

N. Gastrocnemius--Posterior lower leg

O. Vastus lateralis--Lateral thigh

P. Orbicularis oculi--Around eye

Q. Orbicularis oris--Around mouth

R. Achilles tendon--Back of heel

INFORMATION SHEET

S. Aponeurosis--Small of back

T. Olecranon process--Elbow

U. Intercostals--Breathing muscles

V. Quadriceps femoris--Anterior thigh

  1. Vastus lateralis
  2. Vastus intermedius
  3. Vastus medialis

VII. Ways to maintain the muscular system

A. Exercise regularly and sensibly

B. Avoid carrying loads which may cause strain

C. Learn to relax voluntary muscles at will

D. Rest sufficiently to relieve muscle fatigue

E. Use proper body mechanics at all times

F. Maintain an adequate diet

G. Maintain adequate oxygen supply

VIII. Types of bones

A. Long (length is greater than breadth)

  1. Humerus
  2. Radius
  3. Ulna
  4. Femur
  5. Tibia
  6. Fibula

B. Short (length and breadth nearly equal)

  1. Wrist
  2. Ankle

INFORMATION SHEET

C. Flat (two layers of compact bone separated by a narrow space)

   1. Skull
   2. Sternum
   3. Ribs

      (NOTE: The first seven pairs of ribs are called true ribs and are attached to the sternum, the next five pairs are called false ribs because the eighth, ninth and tenth pairs attach to the cartilage of the rib above, and the last two ribs are called floating because they are not attached to any bones in front.)

   4. Shoulder blade

D. Irregular

   (NOTE: These are shapes that do not fit into the first three groups.)

   1. Face
   2. Spine
   3. Hip

E. Sesamoid--Patella

IX. Divisions of the skeleton

A. Axial skeleton (bony framework of head and trunk)

   (NOTE: Average adult axial skeleton includes eighty bones; a child's bones change through the growth process.)

   1. Skull
   2. Vertebrae
   3. Ribs and sternum

B. Appendicular skeleton (framework of extremities)

   (NOTE: Average adult appendicular skeleton includes 126 bones.)

   1. Upper extremities
   2. Lower extremities

INFORMATION SHEET

X. Bones of the skull (Transparencies 3 and 4)

  A. Cranium

    1. Frontal bone
    2. Parietal
    3. Temporal
    4. Sphenoid
    5. Occipital

    (NOTE: The cranial bones join together by way of sutures.)

  B. Facial

    1. Mandible
    2. Maxillary
    3. Zygomatic
    4. Nasal

    (NOTE: There are many small bones inside the skull and processes or points that articulate with other bones.)

XI. Sinuses found in the skull (Assignment Sheet #1)

  A. Frontal

  B. Sphenoid

  C. Maxillary

  D. Ethmoid

  (NOTE: Sinuses are paired and are found in the bone with the same name.)

XII. Regions of the spinal column (Transparency 5)

(NOTE: For easy reference the vertebrae are numbered and used in charting.)

Example: Injury extends from T4 - L4.

  A. Cervical

  (NOTE: This region is made up of 7 vertebrae. A fracture in any of these vertebrae can be very dangerous because of the delicate spinal cord encased in the bones. In the average adult the spinal cord ends somewhere between the first and second lumbar vertebrae.)

INFORMATION SHEET

B. Thoracic

(NOTE: This region contains twelve bones and has twelve pairs of ribs attached to the column.)

C. Lumbar

(NOTE: This area is made up of five vertebrae.)

D. Sacral (sacrum)

(NOTE: The child has five sacral bones which eventually join into one by adulthood.)

E. Coccygeal (coccyx)

(NOTE: The child has four or five coccygeal bones which eventually join into one by adulthood.)

XIII. Bones of the body (Transparencies 6 and 7))

A. Axial skeleton

1. Cranium
2. Cervical vertebrae
3. Thoracic vertebrae
4. Lumbar vertebrae

   (NOTE: The cervical thoracic and lumbar vertebrae are identified by numbers for ease in reference in charting, x-ray and reports.)

5. Sacrum
6. Coccyx
7. Sternum
8. Xiphoid process
9. Ribs

B. Appendicular skeleton (upper extremities)

1. Clavicle
2. Scapula
3. Humerus
4. Ulna

INFORMATION SHEET

5. Radius
6. Carpals
7. Metacarpals
8. Phalanges

C. Appendicular skeleton (lower extremities)

1. Ilium
2. Ischium
3. Pubis

   (NOTE: The ilium, ischium, and pubis make up the pelvis.)

4. Femur and greater trochanter
5. Patella
6. Tibia
7. Fibula
8. Tarsals
9. Metatarsals
10. Phalanges
11. Calcaneus

XIV. Parts of a long bone (Transparency 8)

A. Cancellous bone

B. Compact bone

C. Periosteum

D. Endosteum

E. Bone marrow cavity

F. Epiphyseal cartilage

G. Epiphysis

H. Diaphysis

I. Articular cartilage

INFORMATION SHEET

XV. Ways to maintain the skeletal system

- A. Maintain good posture
- B. Give special attention to foot care
- C. Maintain adequate diet for growth and maintenance, including Vitamin D, calcium, iron, phosphorus, and protein
- D. Use proper body mechanics at all times
- E. Exercise regularly

XVI. Types of joints

- A. Immovable with no joint cavities--Cranium

  (NOTE: Bony areas of the skull are connected by a thin layer of fibrous connective tissue, a joint called a suture.)

- B. Slightly movable
  1. Vertebral discs
  2. Symphysis pubis
  3. Sacroiliac joints
- C. Freely movable synovial joints

  (NOTE: These are joints that contain a membrane that secretes a viscid white fluid, synovial fluid, which provides lubrication for movement.)

  1. Shoulder joints
  2. Elbow, wrist, and finger joints
  3. Knee and ankle joints

XVII. Ways to move joints (Transparency 9)

- A. Flexion
- B. Extension
- C. Abduction
- D. Adduction
- E. Rotation
- F. Pronation
- G. Supination

INFORMATION SHEET

XVIII. Common diseases, disorders, and procedures related to the musculoskeletal system

A. Osteomyelitis--Infection of bones caused by pathogenic bacteria

(NOTE: Causative organism is usually staphylococcus.)

B. Pott's disease--Tuberculosis of the spine

C. Rickets--Disease mainly seen in children due to lack of calcium and phosphorus in diet, causing bones not to grow and calcify properly

D. Sprain--Condition caused by trauma to joint, causing injury to ligaments and sometimes damage to surrounding tissues

(NOTE: Another word that may be used is *strain*.)

E. Muscular dystrophy--Disease of unknown origin causing muscles to atrophy and waste away

F. Myasthenia gravis--Disease that causes great muscle weakness but not atrophy

G. Bursitis--Inflammation of the cavity or sac filled with synovial fluid; makes movement of joint difficult

H. Arthritis--Inflammation of a joint, causing pain and sometimes change in shape of joint

(NOTE: There are many types of arthritis, two of the most common being osteoarthritis and rheumatoid arthritis.)

I. Dislocation--Condition in which the joint articulating surfaces are not connecting and have been pulled apart

J. Amputation--Surgical removal of a diseased organ or limb

K. Osteoporosis--Condition marked by imbalance in bone formation and reabsorption that weakens bone

(NOTE: Condition usually occurs in postmenopausal women.)

L. Kyphosis--Exaggerated curvature of the normal posterior curve of the spine; also known as hunchback

M. Lordosis--Abnormal anterior curvature of spine; also known as swayback

N. Scoliosis--Lateral curvature of the spine

INFORMATION SHEET

XIX. Types of bone fractures (Transparency 10)

A. Compound--Skin and other tissues torn to expose bone protruding through the surface

(NOTE: This is a very dangerous fracture because of the exposure to bacteria through the wound.)

B. Simple--Fracture where the bone has broken but the skin has not broken

C. Greenstick--Fracture that is incomplete, with the bone splitting

(NOTE: Young children have these types of fractures that heal readily because of the pliability of the young growing bone.)

D. Impacted--Fracture where the ends of the broken bones are jammed together

E. Comminuted--Fracture where there is more than one break and there are fragments of bone around the bone

F. Spiral--Fracture in which the bone has been twisted and the break line leads up and around the bone

(NOTE: Fractures of the bones are treated in various ways depending on the severity of the break. Many breaks, like the simple fracture, may be splinted or casted until healed; more serious breaks, like the comminuted or impacted, may call for surgery, pins, wires, traction, and casting, calling for a longer time for healing.)

XX. Body mechanics

A. Body mechanics--Coordination of body alignment, balance, and movement

B. Fatigue--State of increased discomfort and decreased efficiency resulting from prolonged exertion

C. Posture--Alignment and position of the body

D. Alignment--Relationship of body segments to each other

XXI. Reasons the medical assistant should use proper body mechanics

A. Saves energy by making work easier

B. Prevents muscle strain

C. Increases efficiency

D. Promotes good posture

E. Improves health and appearance

INFORMATION SHEET

F. Sets example for others, particularly patients

G. Preserves muscle tone and strength

XXII. Principles of body mechanics

A. Broaden base of support by standing with feet slightly apart to give more balance and stability

B. Maintain good alignment of body parts to reduce strain and fatigue

C. Change position and type of activity to help maintain muscle tone and lessen fatigue

D. Carry weight close to body to use less effort

(NOTE: Reach toward work or carry heavy objects away from body to avoid causing strain.)

E. Improve circulation in legs and feet and reduce muscle strain by using proper body alignment while sitting

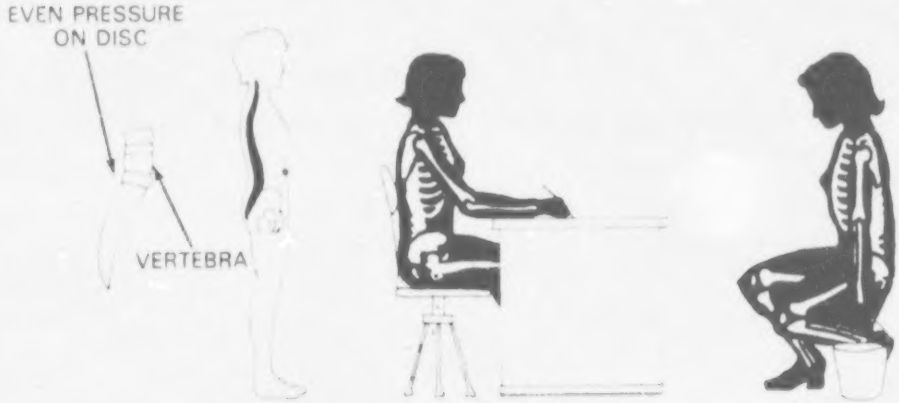
F. Pull, slide, or roll object rather than lift it to use less effort

G. Move heavy objects on a smooth surface rather than on a wrinkled or rough surface

H. Use mechanical devices whenever possible to lift and turn heavy or helpless patients

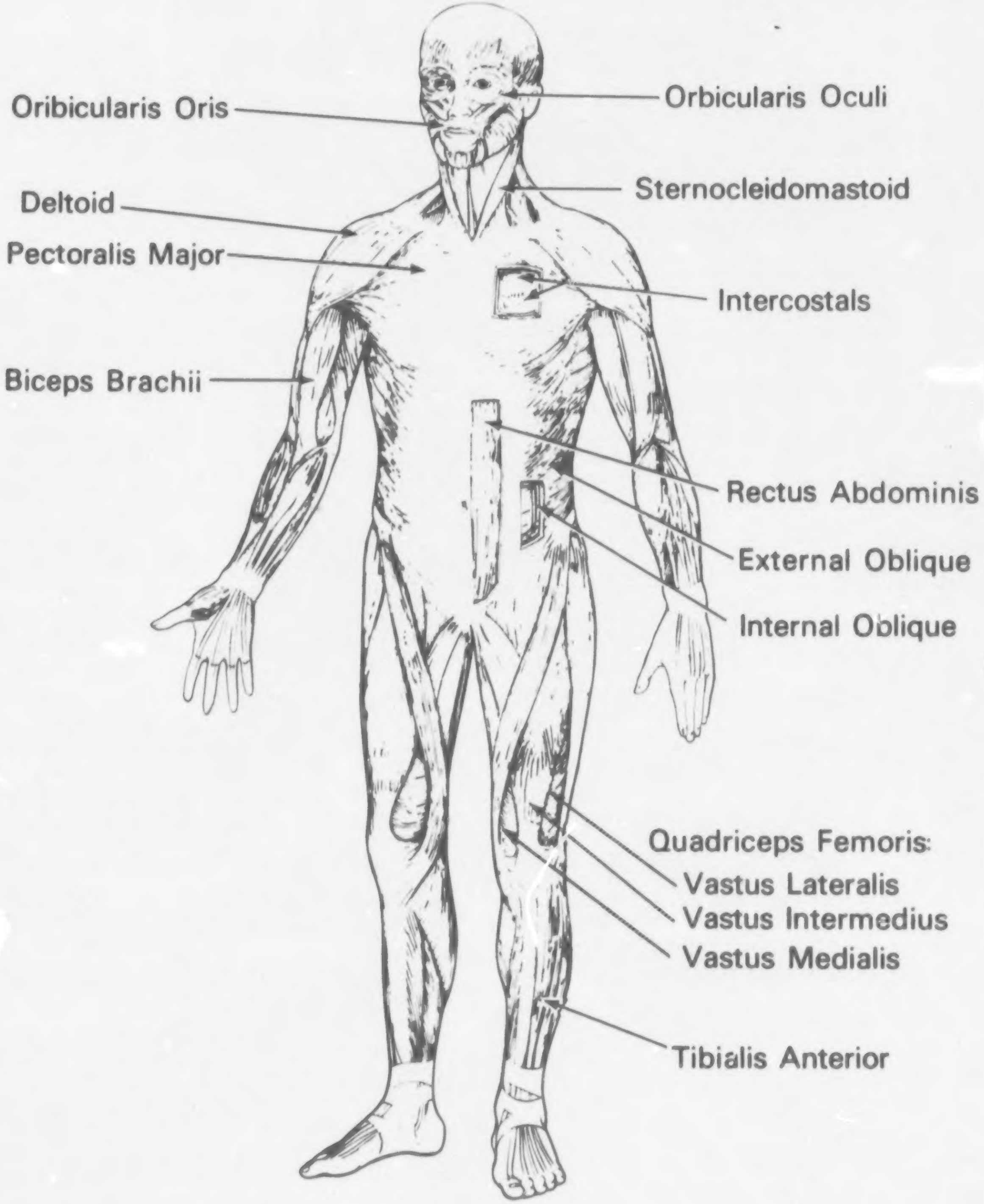
I. Encourage patients to help themselves as much as possible

XXIII. Correct body alignment when standing, sitting, and lifting

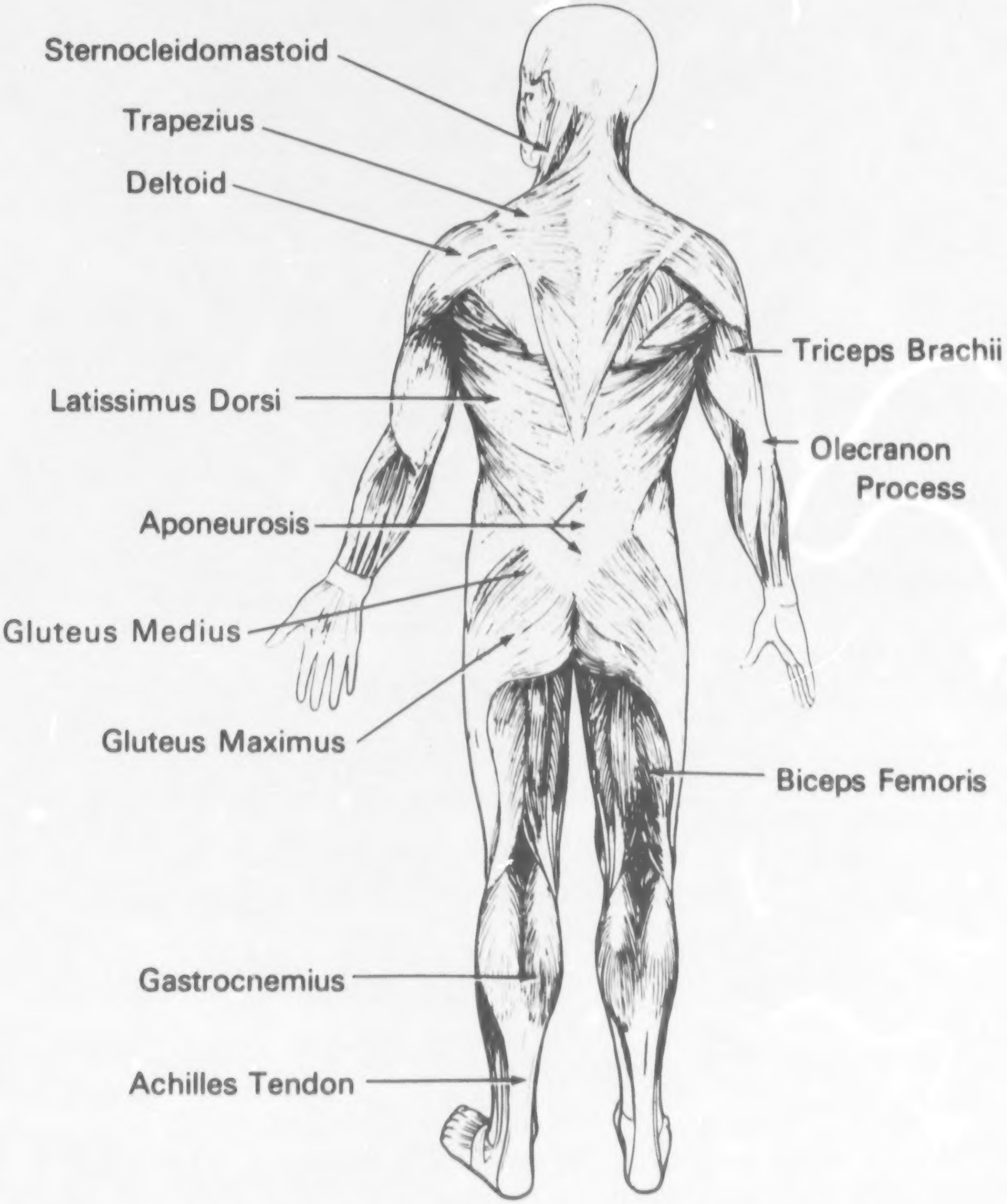


Standing Sitting Lifting

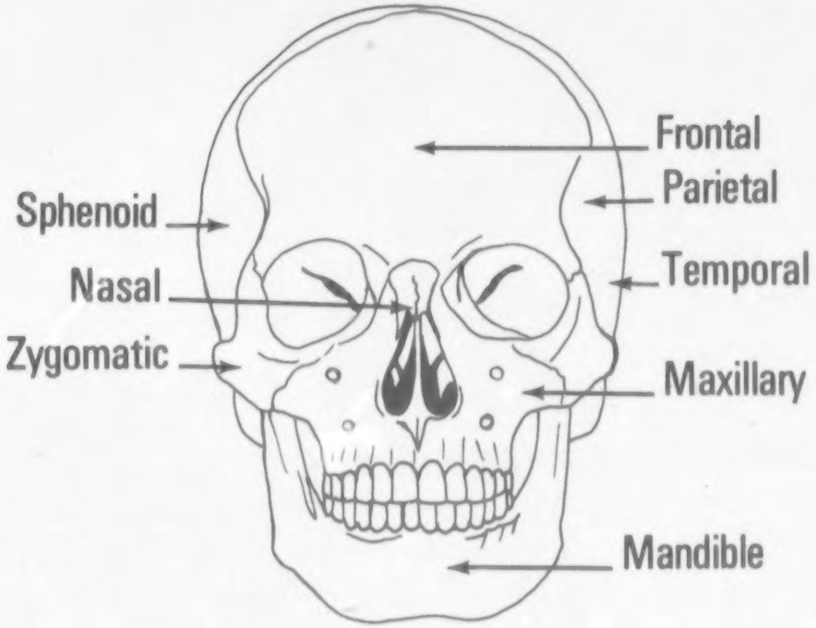
Muscles: Anterior View


Oribicularis Oris
Orbicularis Oculi
Sternocleidomastoid
Deltoid
Pectoralis Major
Intercostals
Biceps Brachii
Rectus Abdominis
External Oblique
Internal Oblique
Quadriceps Femoris:
Vastus Lateralis
Vastus Intermedius
Vastus Medialis
Tibialis Anterior

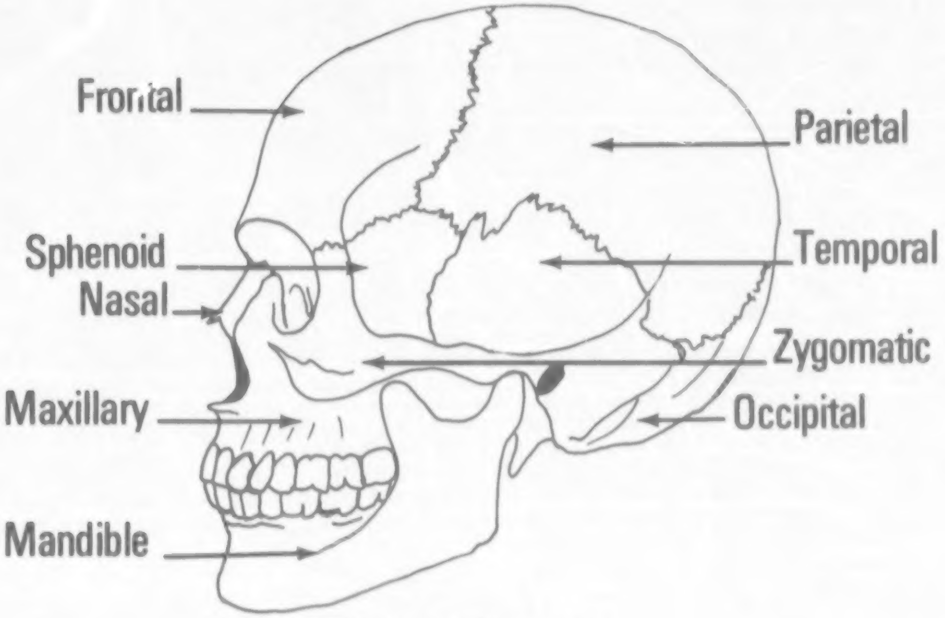
Muscles: Posterior View


Sternocleidomastoid
Trapezius
Deltoid
Triceps Brachii
Latissimus Dorsi
Olecranon Process
Aponeurosis
Gluteus Medius
Gluteus Maximus
Biceps Femoris
Gastrocnemius
Achilles Tendon

Skeleton of Head


Frontal
Parietal
Sphenoid
Nasal
Temporal
Zygomatic
Maxillary
Mandible

Front View


Frontal
Parietal
Sphenoid
Temporal
Nasal
Zygomatic
Maxillary
Occipital
Mandible

Side View

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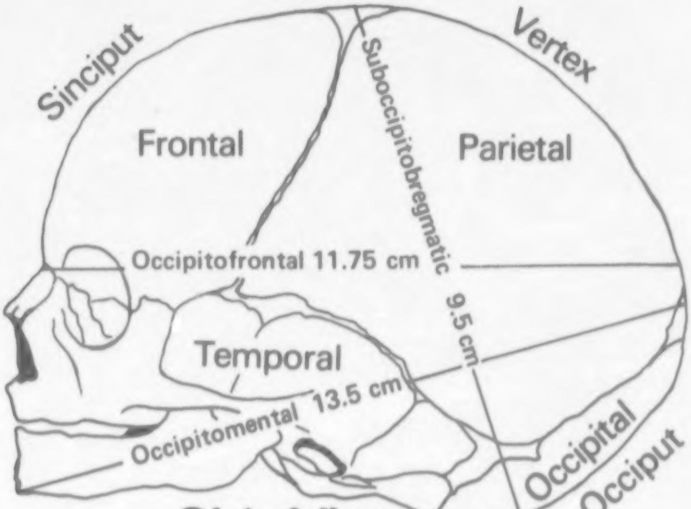
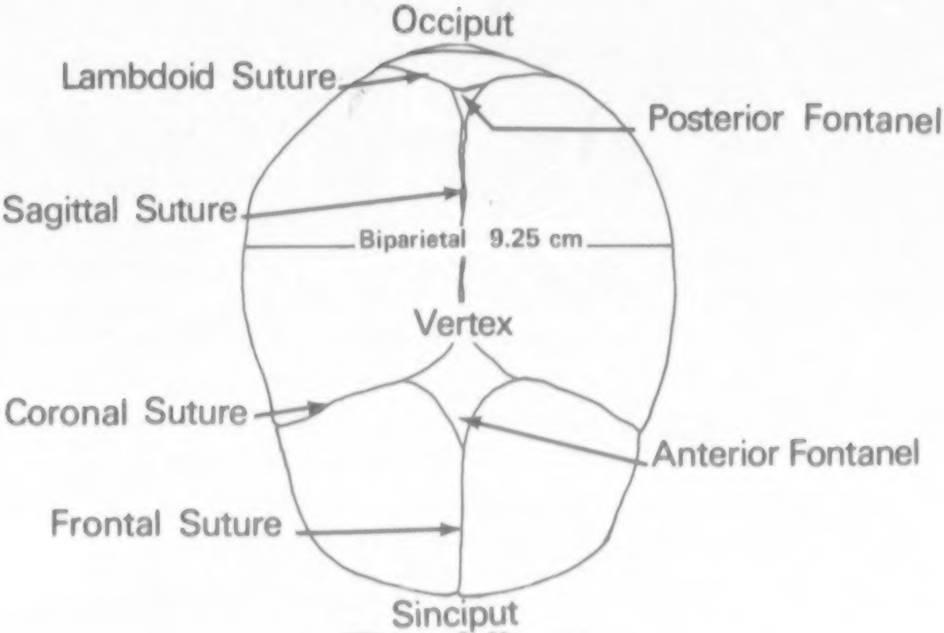
Skeleton of Head of Infant


Sinciput
Vertex
Frontal
Parietal
Suboccipitobregmatic 9.5 cm
Occipitofrontal 11.75 cm
Temporal
Occipitomental 13.5 cm
Occipital
Occiput

Side View


Occiput
Lambdoid Suture
Posterior Fontanel
Sagittal Suture
Biparietal 9.25 cm
Vertex
Coronal Suture
Anterior Fontanel
Frontal Suture
Sinciput

Top View

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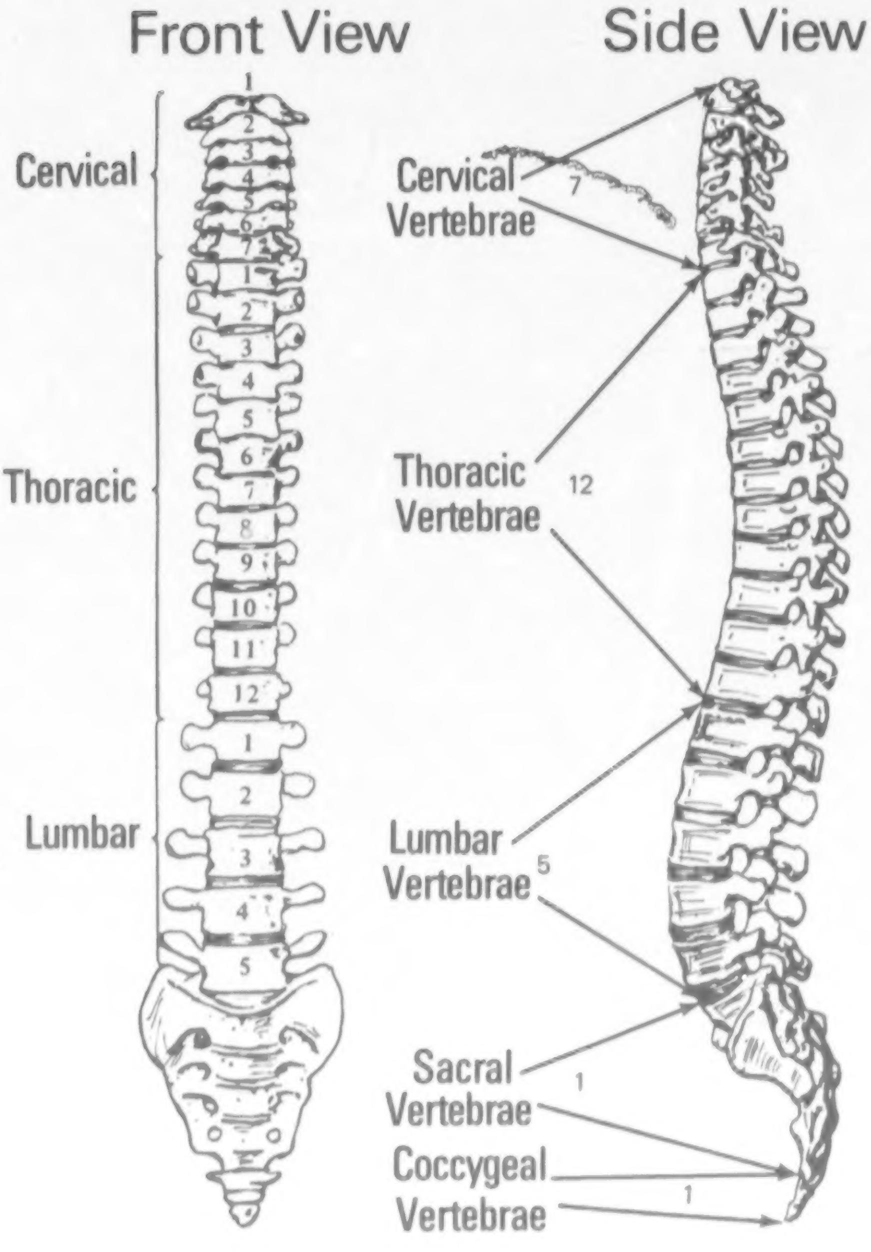
Regions of the Spinal Column



Front View

Side View

1
2
3
4
5
6
7
Cervical
1
2
3
4
5
6
7
8
9
10
11
12
Thoracic
1
2
3
4
5
Lumbar
Cervical Vertebrae
7
Thoracic Vertebrae
12
Lumbar Vertebrae
5
Sacral Vertebrae
1
Coccygeal Vertebrae
1

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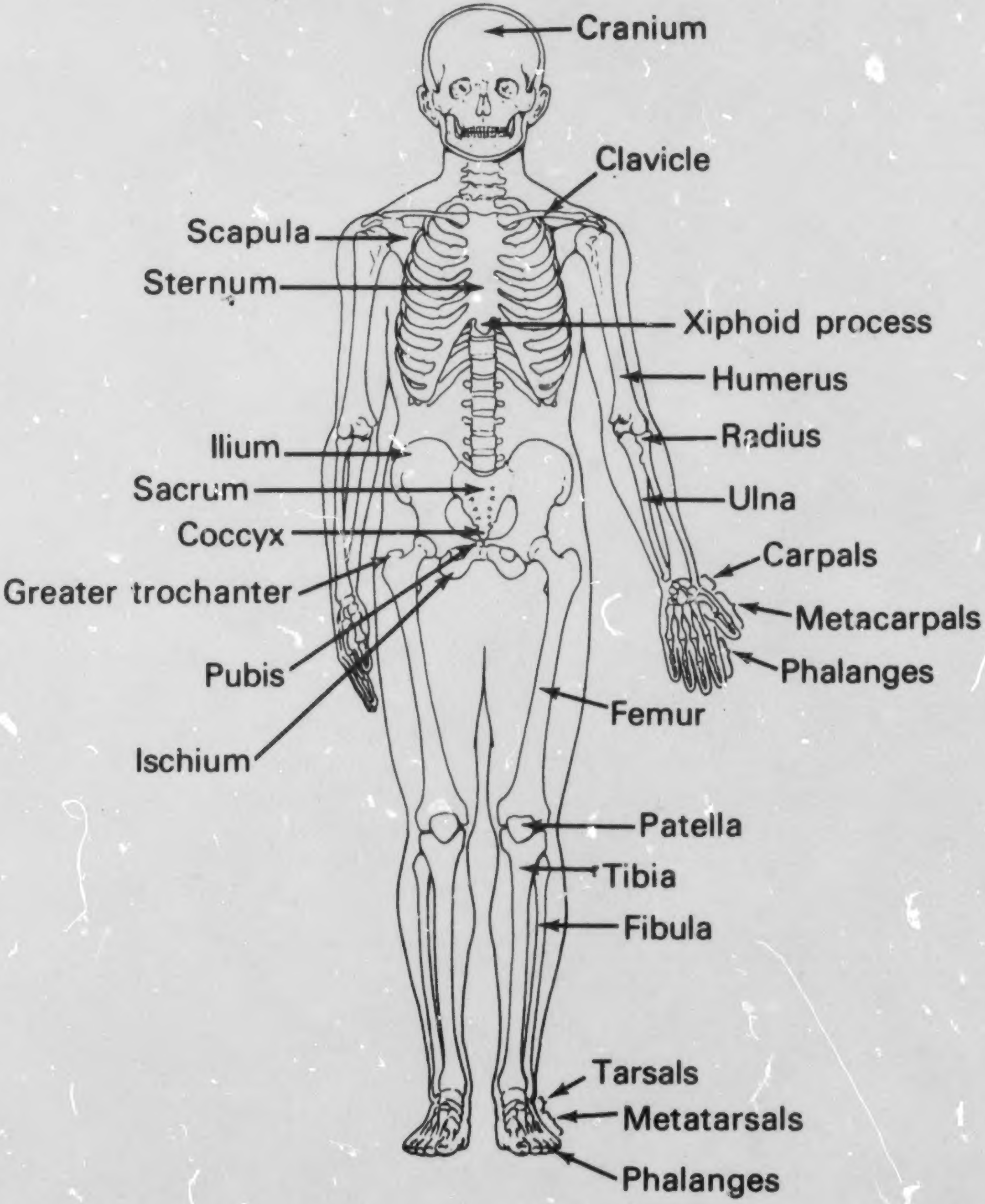
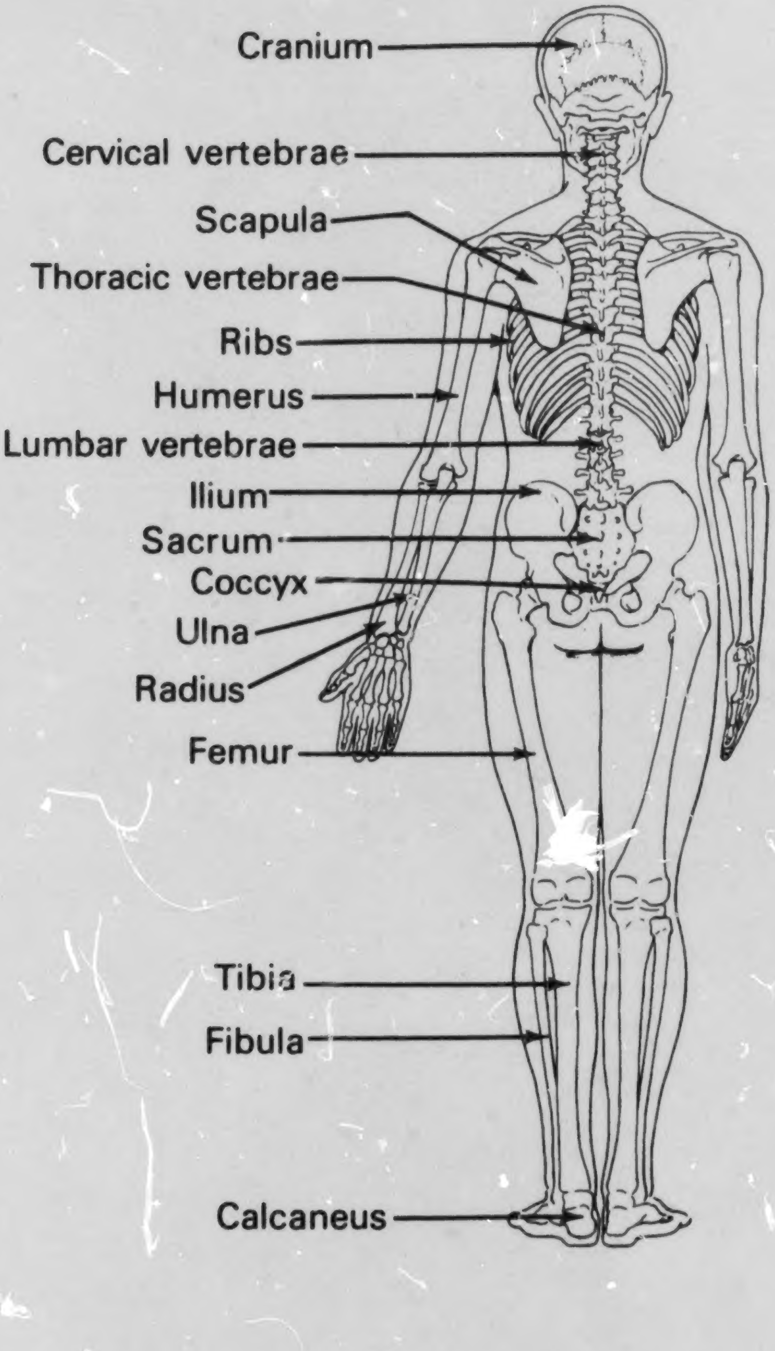
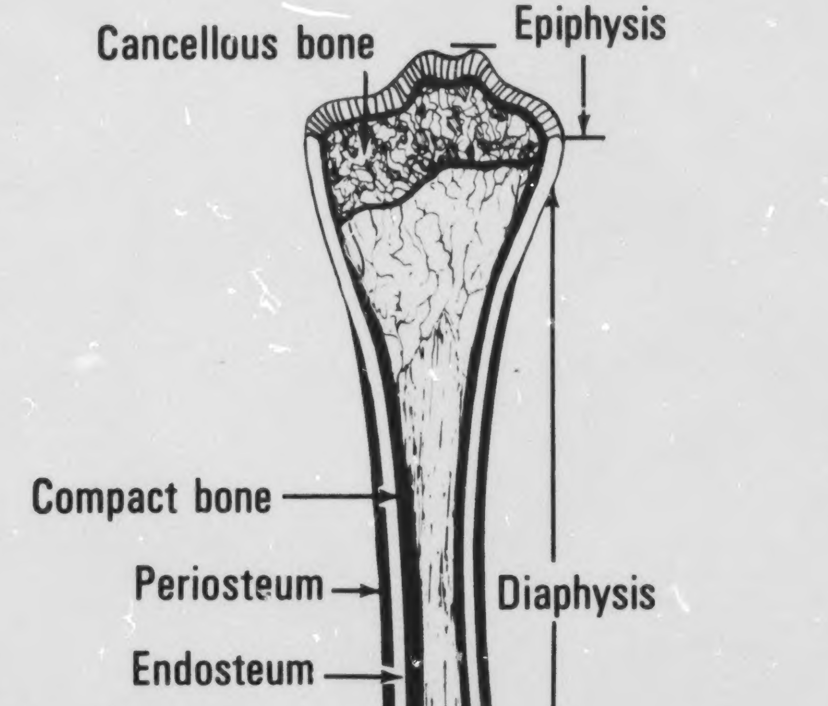
Anterior View of the Skeleton


Cranium
Clavicle
Scapula
Sternum
Xiphoid process
Humerus
Ilium
Radius
Sacrum
Ulna
Coccyx
Carpals
Greater trochanter
Metacarpals
Pubis
Phalanges
Femur
Ischium
Patella
Tibia
Fibula
Tarsals
Metatarsals
Phalanges

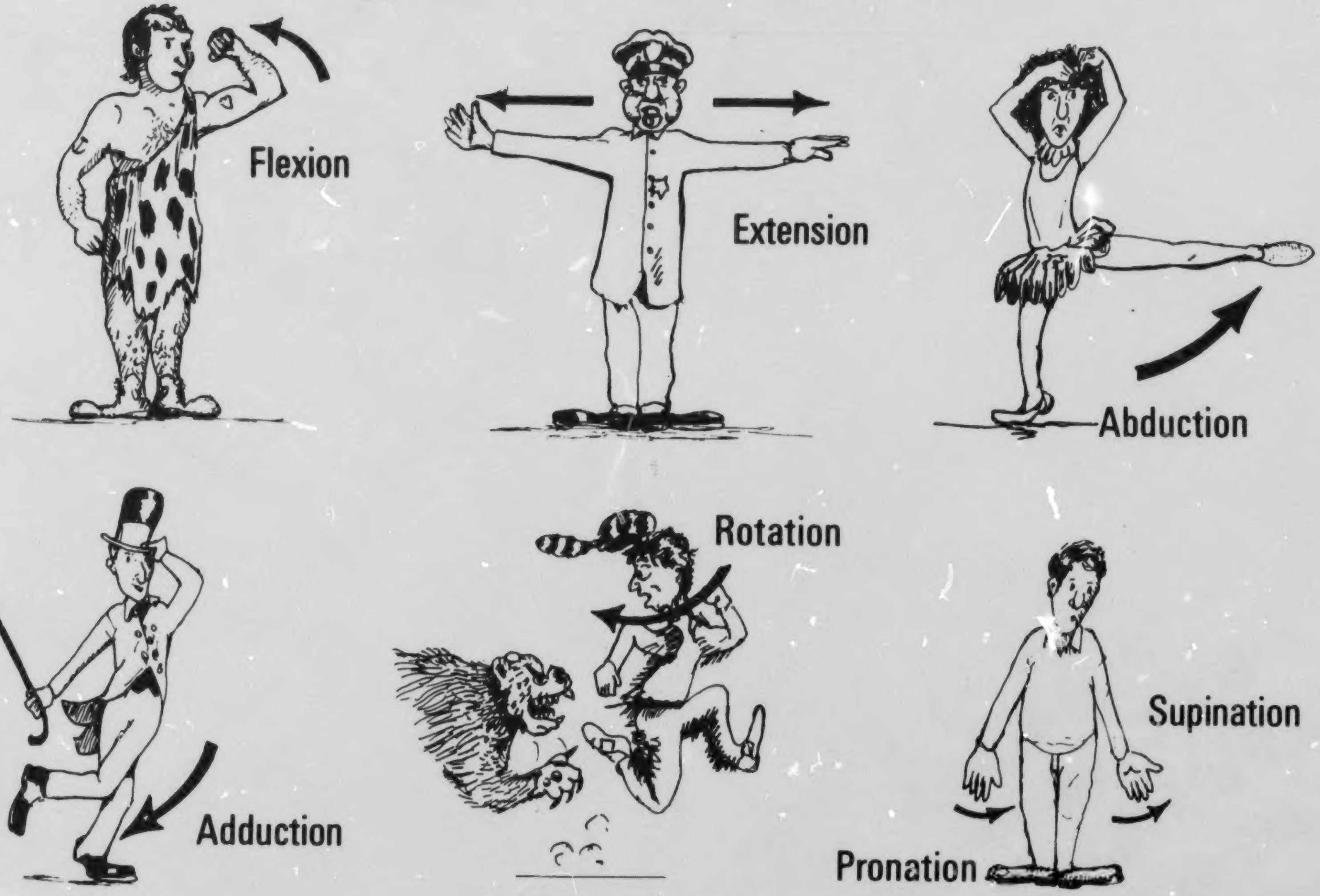
Posterior View of the Skeleton


Cranium
Cervical vertebrae
Scapula
Thoracic vertebrae
Ribs
Humerus
Lumbar vertebrae
Ilium
Sacrum
Coccyx
Ulna
Radius
Femur
Tibia
Fibula
Calcaneus

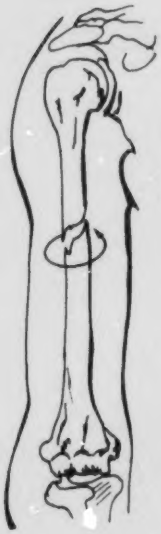
Parts of a Long Bone


Cancellous bone
Epiphysis
Compact bone
Periosteum
Endosteum
Diaphysis
Bone marrow cavity
Epiphyseal cartilage
Articular cartilage

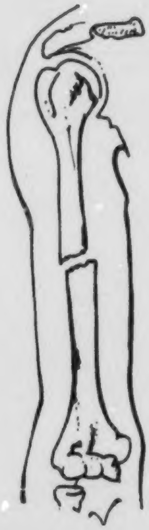
Types of Joint Movement


Flexion
Extension
Abduction
Rotation
Adduction
Supination
Pronation

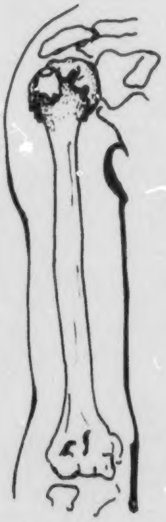
Types of Bone Fractures



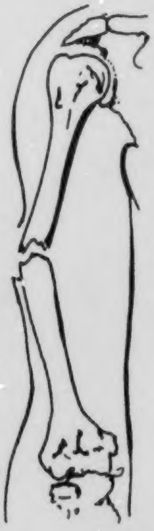
Spiral



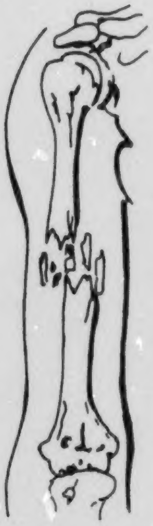
Simple



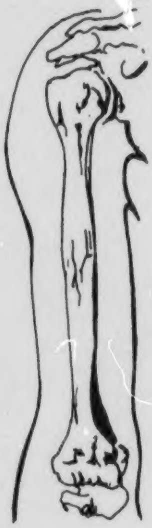
Impacted



Compound



Comminuted



Greenstick

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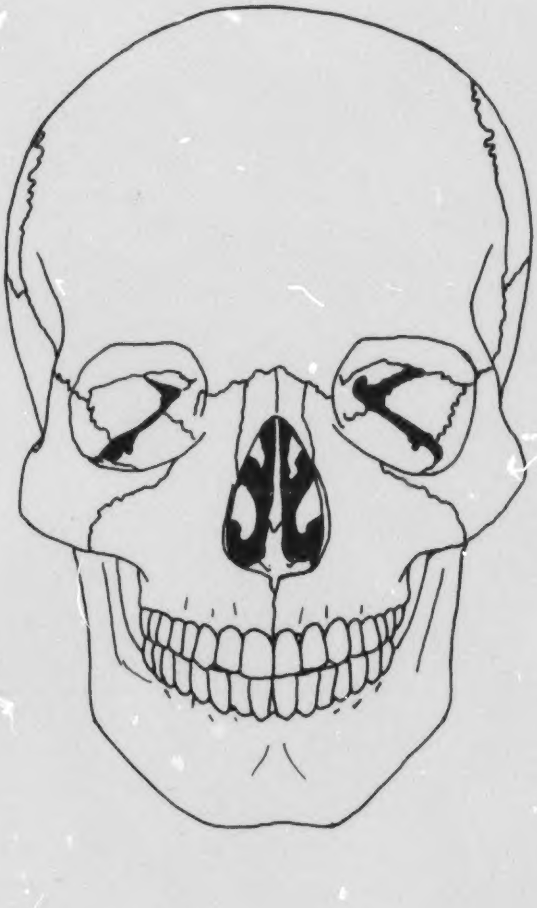
MUSCULOSKELETAL SYSTEM
UNIT VII

ASSIGNMENT SHEET #1--LOCATE THE SINUSES IN THE SKULL

NAME ______________________________ SCORE ______________

How many times have we heard someone speak of having sinusitis, or having a sinus headache? Of course we know that itis means inflammation and in many cases caused by an infection. A sinus is a canal or a passage within a bone and here we are talking about bones of the skull. Using a text provided by your instructor or one that you have found, locate the sinuses and draw them in on the diagram of the skull below. Remember that the sinuses are paired.



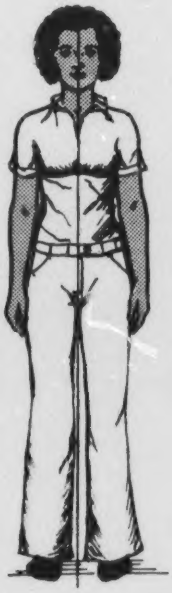
MUSCULOSKELETAL SYSTEM
UNIT VII

JOB SHEET #1--APPLY PRINCIPLES OF BODY MECHANICS

(NOTE: The use of good body mechanics in the medical office is imperative for the protection of the MA and the patients in his/her care. Correct methods of standing, sitting, bending, and lifting, and reaching should be practiced and used daily, not only on the job but at home as well. Practice the steps below and have a classmate evaluate your use of body mechanics.)

I. Standing (Figure 1)

FIGURE 1



A. Stand erect with arms close to sides hanging straight down

B. Hold head erect, shoulders back and chest slightly out

C. Flatten abdomen so that pelvic contents are not resting against abdominal wall

D. Make sure knees are slightly flexed

E. Point feet forward and stand with feet slightly apart, giving a broad base of support

(NOTE: Body should be relaxed in this position and it can be assumed for long periods of time without fatigue.)

JOB SHEET #1

II. Sitting (Figures 2 and 3)

FIGURE 2

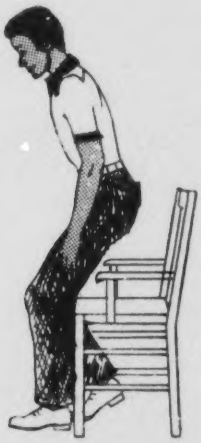
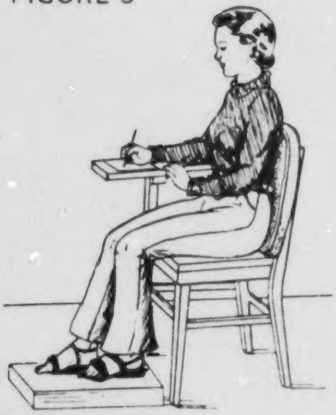


FIGURE 3



(NOTE: Medical assistants who work "up-front" in the office should learn proper posture for sitting at desk to prevent fatigue and promote good circulation.)

A. Stand close to the chair and place a foot under it to broaden base of support

B. Lower body and shift weight of trunk toward the back

C. Hold vertebrae as straight as possible

D. Rest feet flat on floor

(NOTE: Crossing legs will hamper circulation and may cause problems in lower legs and feet.)

E. Make sure that the chair is high or low enough so that the feet can rest flat on the floor

(NOTE: If necessary a firm cushion may be placed in chair to correct any undesired slant that may occur, causing the body to slide forward or backward.)

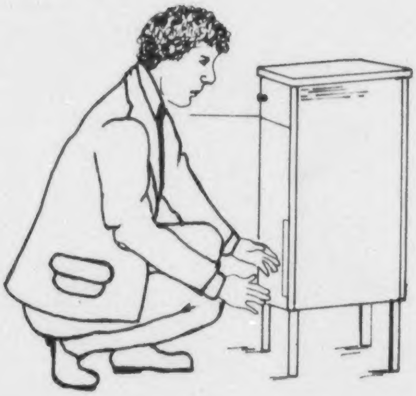
F. Make sure the seat is deep enough to sit all the way back in the chair

G. Sit with one foot forward to add stability when moving toward the desk

JOB SHEET #1

III. Bending and lifting (Figure 4)

FIGURE 4



A. Lower body toward floor, keeping the spine in good alignment

(NOTE: Hips and knees should be flexed, with the work done by muscles in the legs.)

B. Place feet slightly apart to provide a wide base of support and to provide good balance

C. Make sure you have a secure hold with both hands when lifting objects

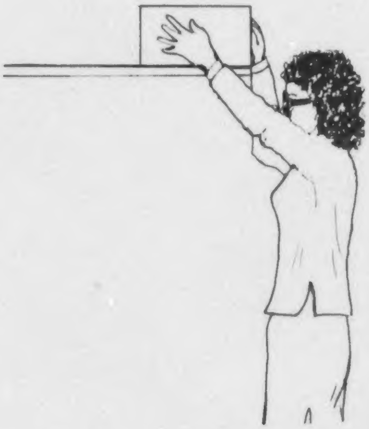
(CAUTION: Do not lift objects that are too heavy or that are not balanced well. It is better to lift several items separately or get assistance rather than risk injuring yourself.)

D. Use leg muscles when lifting item from floor up to waist level

(NOTE: Practice lifting different objects from the floor to learn correct movements.)

IV. Reaching (Figure 5)

FIGURE 5



JOB SHEET #1

A. Stand close enough to object to keep a good solid base of support

B. Place feet slightly apart so that you may pivot body with arms extended to reach object

C. Try to keep back in good alignment while reaching

D. Make sure you have good balance and firm hold on object

E. Use upper arm muscles to bring object down to your level

(NOTE: Practice reaching for objects from several different heights.)

MA - 307-B

MUSCULOSKELETAL SYSTEM
UNIT VII

TEST

NAME______________________________ SCORE______________

1. Match terms associated with the muscular system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Lacking muscle tone

_____b. Muscle which counteracts with a prime mover

_____c. Narrow strip of dense connective tissue that attaches muscle to a bone

_____d. Wasting away

_____e. Within a muscle

_____f. Slight tension in the muscle which is always present, even when muscle is resting

_____g. Bundles of striated muscle tissue surrounded by connective tissue

_____h. Loss of muscle's power to contract after prolonged periods of contraction

_____i. Study of muscles

_____j. Muscle primarily responsible for a specific action

1. Myology
2. Antagonist
3. Tendon
4. Muscle fatigue
5. Atrophy
6. Intramuscular
7. Flaccid
8. Tonus
9. Skeletal muscles
10. Prime mover

2. Match terms associated with the skeletal system to the correct definitions. Place correct numbers in the blanks provided.

_____a. Chamber or cavity in a bone

_____b. Study of bones

_____c. White elastic substance attached to bone surfaces at the joints

_____d. Pertaining to a limb or appendage

_____e. Hole or opening for passage of blood vessels, nerves, and ligaments

1. Osteology
2. Cartilage
3. Foramen
4. Sinus
5. Appendicular

_____f. Rounded portion beyond narrow, neck-like portion of a long bone

_____g. Tough, fibrous band binding together bones or supporting internal organs

_____h. Study of joints

_____i. Point where bones are joined together; a joint

_____j. Pertaining to the central part; skeleton of head and trunk

_____k. Anything attached to a larger part; a dependent part

6. Articulation
7. Ligament
8. Appendage
9. Head
10. Axial
11. Arthrology

3. Distinguish between major functions of muscles and bones. Place an "M" before muscle functions and a "B" before bone functions in the correct blank.

_____a. Protect vital organs

_____b. Dictate posture and body mechanics

_____c. Store minerals such as calcium and phosphorus

_____d. Provide shape and support

_____e. Assist in body movement

_____f. Manufacture red blood cells, platelets, and some white cells

_____g. Allow movement

_____h. Protect internal organs

_____i. Result in heat and energy due to chemical reaction within the tissue

4. Match types of muscles to their correct actions by placing the correct numbers in the blanks provided.

_____a. Revolve a part on its axis

_____b. Lower a part

_____c. Move away from a part

_____d. Straighten a joint

_____e. Ring-like muscles that close body openings

_____f. Bend a joint

_____g. Move toward a part or to the midline

_____h. Lift a part

1. Abductors
2. Adductors
3. Levators
4. Depressors
5. Flexors
6. Extensors
7. Rotators
8. Sphincters

5. Match characteristics of muscle tissue to the correct descriptions. Place the correct numbers in the blanks provided.

_____a. Ability of a muscle to stretch

_____b. Ability of a muscle to shorten and thicken when given the proper stimulus

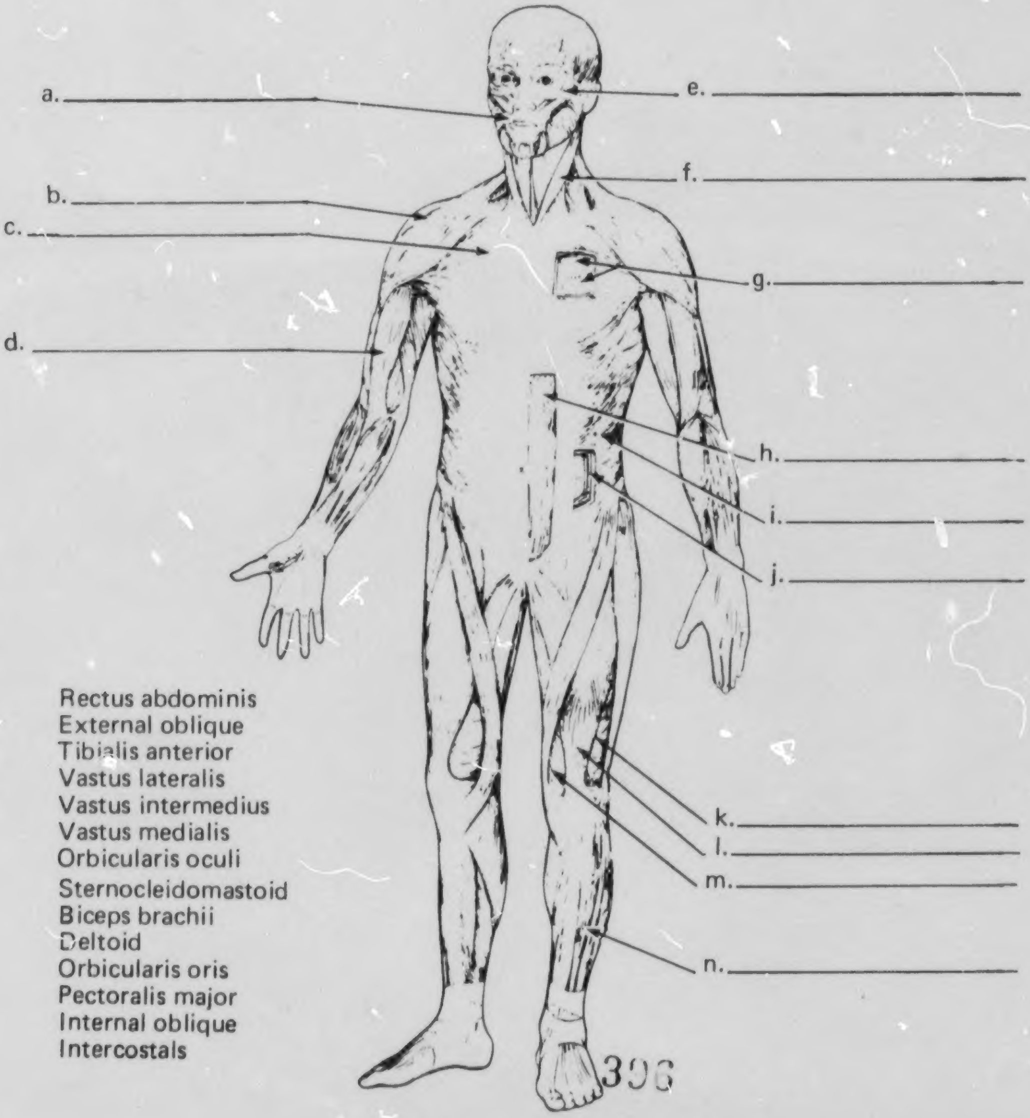
_____c. Ability of a muscle to respond to stimulation

_____d. Ability of a muscle to return to its original length after stretching

1. Contractility
2. Elasticity
3. Extensibility
4. Irritability

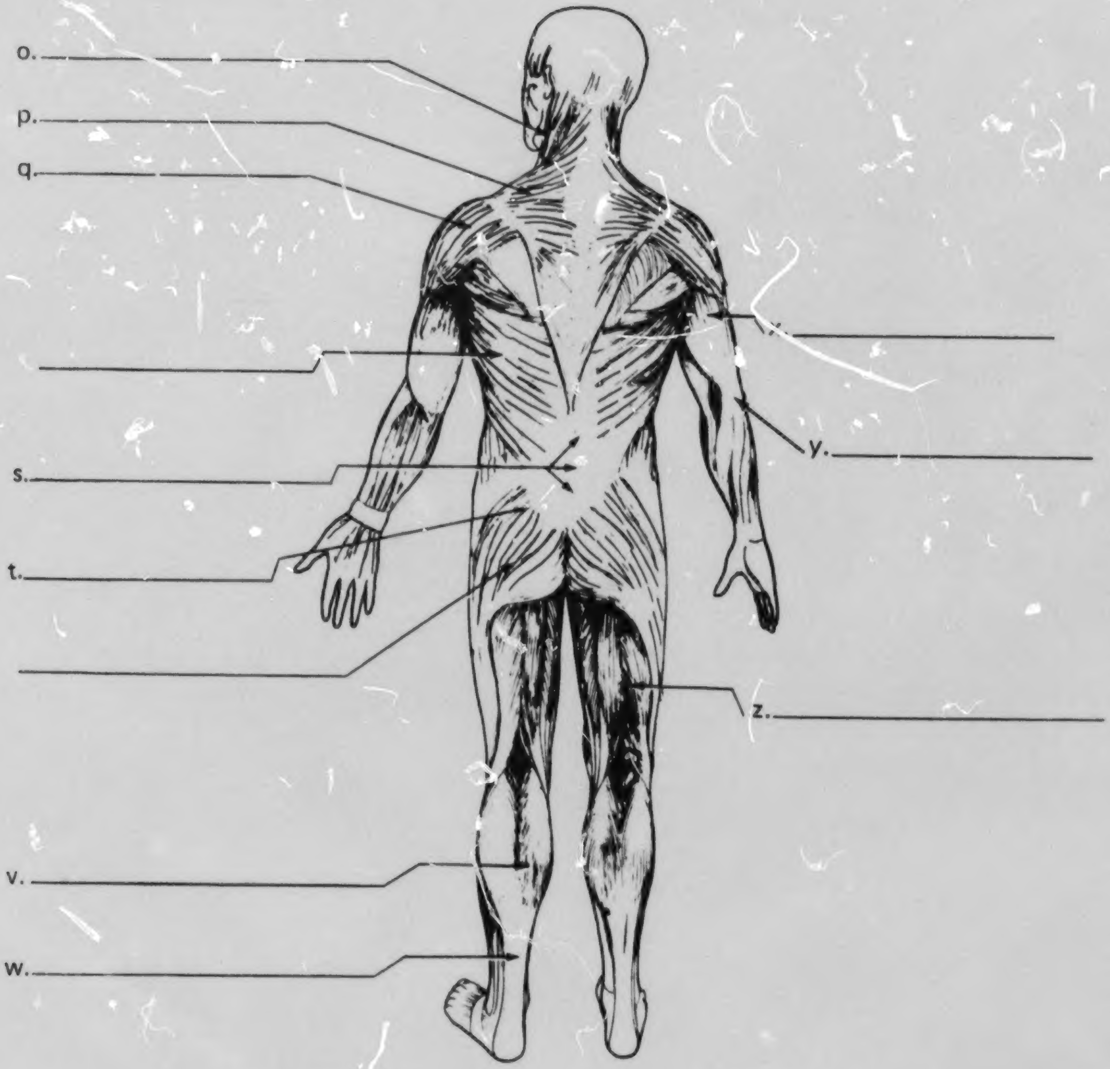
6. Identify the following principal muscles. Place the correct names in the blanks provided.

Anterior



Rectus abdominis
External oblique
Tibialis anterior
Vastus lateralis
Vastus intermedius
Vastus medialis
Orbicularis oculi
Sternocleidomastoid
Biceps brachii
Deltoid
Orbicularis oris
Pectoralis major
Internal oblique
Intercostals

Posterior



Triceps brachii
Biceps femoris
Gastrocnemius
Latissimus dorsi
Gluteus medius
Achilles tendon

Sternocleidomastoid
Aponeurosis
Deltoid
Gluteus maximus
Olecranon process
Trapezius

7. State ways to maintain the muscular system.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

8. Distinguish between types of bones. Place an "L" for long bones, an "S" for short bones, an "F" for flat bones, an "I" for irregular bones and an "SE" for sesamoid bones in the correct blanks.

_____a. Ribs

_____b. Wrist

_____c. Patella

_____d. Hip

_____e. Humerus

_____f. Face

_____g. Ankle

_____h. Tibia

_____i. Sternum

_____j. Radius

_____k. Ulna

_____l. Skull

_____m. Spine

_____n. Femur

_____o. Shoulder blade

_____p. Fibula

9. Distinguish between divisions of the skeleton. Place an "AX" for axial and an "AP" for appendicular in the blanks provided.

_____a. Upper extremities

_____b. Ribs and sternum

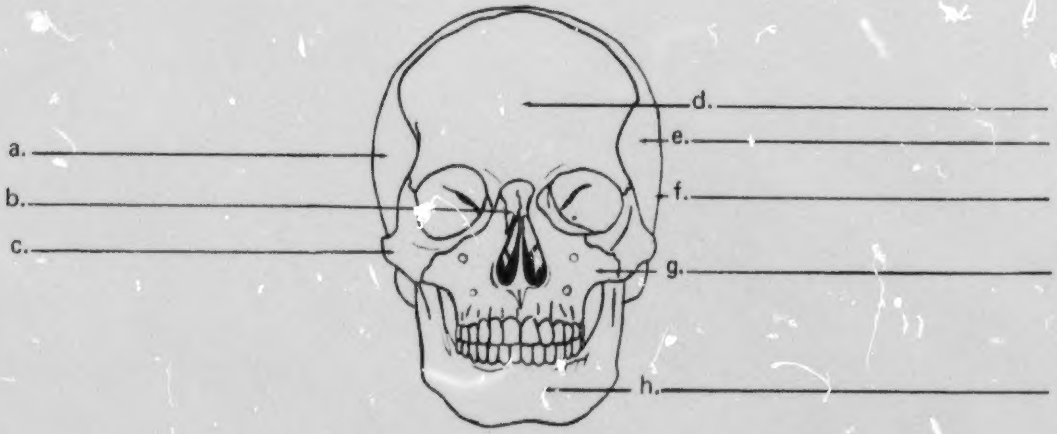
_____c. Vertebrae

_____d. Lower extremities

_____e. Skull

10. Identify the bones of the skull in the following illustrations. Write the correct names in the blanks provided.

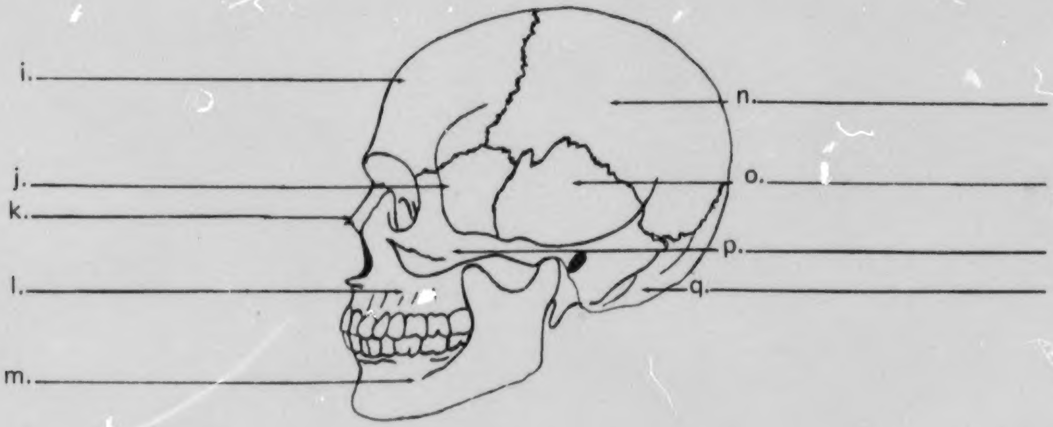
Front view



Sphenoid
Zygomatic
Nasal
Maxillary

Frontal
Parietal
Temporal
Mandible

Side view



Frontal
Sphenoid
Maxillary
Mandible
Occipital

Parietal
Temporal
Zygomatic
Nasal

11. Select from the following list sinuses found in the skull. Mark each correct answer with an "X."

_____a. Frontal

_____b. Temporal

_____c. Maxillary

_____d. Ethmoid

_____e. Parotid

_____f. Sphenoid

12. Select from the following list regions of the spinal column. Mark each correct answer with an "X."

_____a. Lumbar

_____b. Coccygeal (coccyx)

_____c. Laryngeal

_____d. Cervical

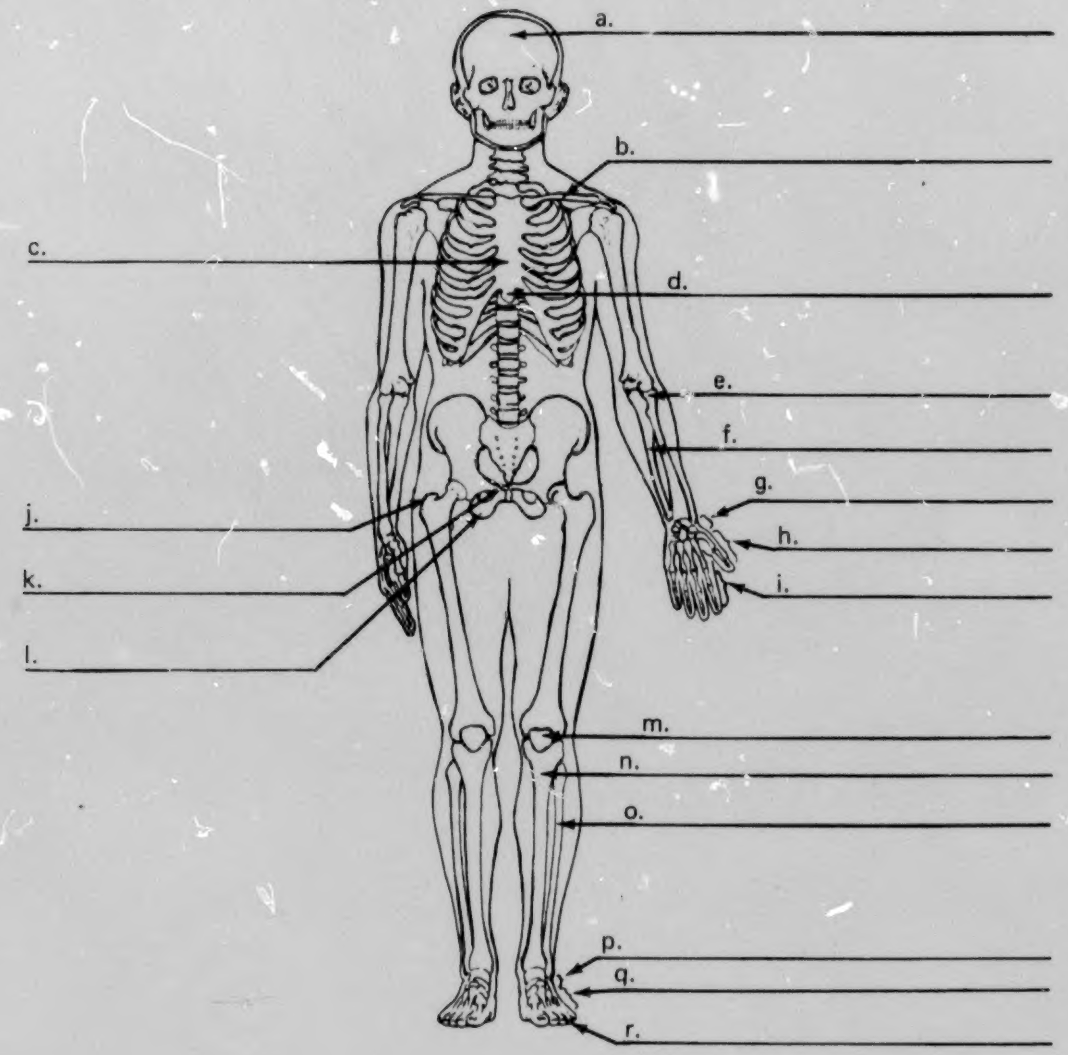
_____e. Sacral (Sacrum)

_____f. Thoracic

_____g. Peritoneal

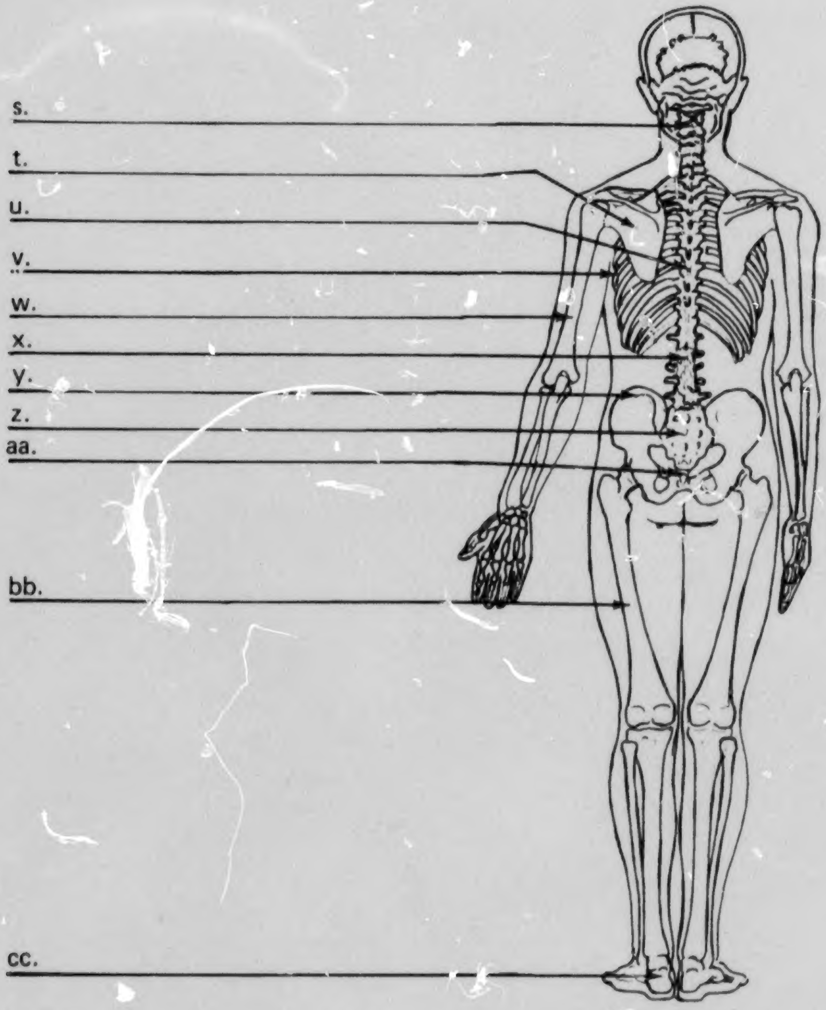
13. Identify bones of the body in the following illustrations. Place the correct names in the blanks provided.

Anterior



Xiphoid process
Pubis
Tarsals
Phalanges
Sternum
Carpals
Ulna
Metatarsals
Patella
Cranium
Radius
Phalanges
Ischium
Tibia
Greater trochanter
Clavicle
Fibula
Metacarpals

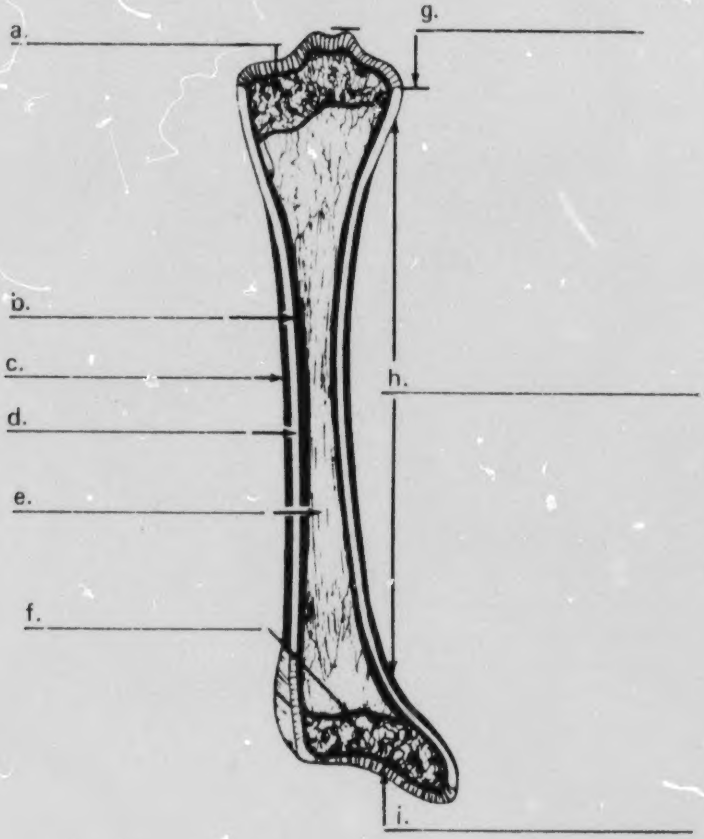
Posterior


s.
t.
u.
v.
w.
x.
y.
z.
aa.
bb.
cc.

Ribs
Coccyx
Cervical vertebrae
Humerus
Ilium
Lumbar vertebrae

Calcaneus
Scapula
Thoracic vertebrae
Sacrum
Femur

14. Identify parts of a long bone. Write the correct terms in the blanks provided.



Endosteum
Diaphysis
Cancellous bone
Epiphysis
Compact bone

Epiphyseal cartilage
Articular cartilage
Periosterum
Bone marrow cavity

15. Select from the following list ways to maintain the skeletal system. Mark each correct answer with an "X."

______a. Exercise regularly

______b. Give special attention to foot care

______c. Take plenty of Vitamin E supplements

______d. Use proper body mechanics at all times

______e. Use larger back muscles for lifting

______f. Maintain adequate diet for growth and maintenance, including Vitamin D, calcium, iron, phosphorus, and protein

______g. Maintain good posture

16. Distinguish between types of joints according to type of movement. Place an "I" for immovable, "SM" for slightly movable, and "FM" for freely movable in the blanks provided.

______a. Symphysis pubis

______b. Cranium

______c. Elbow, wrist, and finger joints

______d. Shoulder joints

______e. Sacroiliac joints

______f. Vertebral discs

______g. Knee and ankle joints

17. Select from the following list ways to move joints. Mark each correct answer with an "X."

______a. Rotation

______b. Extension

______c. Pronation

______d. Abduction

______e. Supination

______f. Flexion

______g. Adduction

______h. Retention

18. Match common diseases, disorders, and procedures related to the musculoskeletal system to the correct definitions. Place the correct number in the blanks provided.

_____a. Inflammation of a joint, causing pain and sometimes change in shape of joint

_____b. Surgical removal of a diseased organ or limb

_____c. Condition caused by trauma to joint, causing injury to ligaments and sometimes damage to surrounding tissues

_____d. Inflammation of the cavity or sac filled with synovial fluid; makes movement of joint difficult

_____e. Infection of bones caused by pathogenic bacteria

_____f. Condition marked by imbalance in bone formation and reabsorption that weakens bone

_____g. Disease of unknown origin causing muscles to atrophy and waste away

_____h. Disease that causes great muscle weakness but not atrophy

_____i. Condition in which the joint articulating surfaces are not connecting and have been pulled apart

_____j. Disease mainly seen in children due to lack of calcium and phosphorus in diet, causing bones not to grow and calcify properly

_____k. Tuberculosis of the spine

_____l. Lateral curvature of the spine

_____m. Exaggerated curvature of the normal posterior curve of the spine; also known as hunchback

_____n. Abnormal anterior curvature of the spine; also known as swayback

1. Amputation
2. Bursitis
3. Muscular dystrophy
4. Arthritis.
5. Sprain
6. Osteomyelitis
7. Osteoporosis
8. Dislocation
9. Myasthenia gravis
10. Pott's disease
11. Rickets
12. Scoliosis
13. Kyphosis
14. Lordosis

19. Describe types of bone fractures.

    a. Compound-- ____

    ____

    b. Greenstick-- ____

    ____

    c. Comminuted-- ____

    ____

    d. Spiral-- ____

    ____

    e. Simple-- ____

    ____

    f. Impacted-- ____

    ____

20. Match terms associated with body mechanics to the correct definitions. Place the correct numbers in the blanks provided.

    _____a. Coordination of body alignment, balance, and movement

    _____b. Alignment and position of the body

    _____c. Relationship of body segments to each other

    _____d. State of increased discomfort and decreased efficency resulting from prolonged exertion

    1. Alignment
    2. Body mechanics
    3. Posture
    4. Fatigue

21. Select from the following list reasons the medical assistant should use proper body mechanics. Mark each correct answer with an "X."

    _____a. Saves energy by making work easier

    _____b. Prevents muscle strain

    _____c. Improves health and appearance

    _____d. Preserves muscle tone and strength

    _____e. Increases efficiency

    _____f. Sets example for others, particularly patients

    _____g. Promotes good posture

    _____h. Aids in preventing hypertension

22. State six principles of body mechanics.

a. ______________________________

b. ______________________________

c. ______________________________

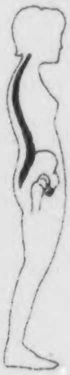
d. ______________________________

e. ______________________________

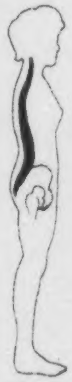
f. ______________________________

23. Identify correct body alignment when standing, sitting, or lifting. Mark each correct illustration with an "X."

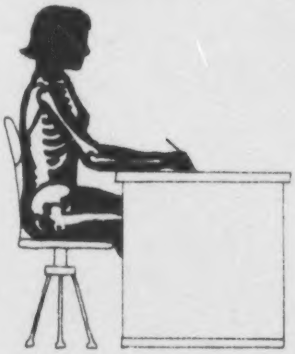
a. ____



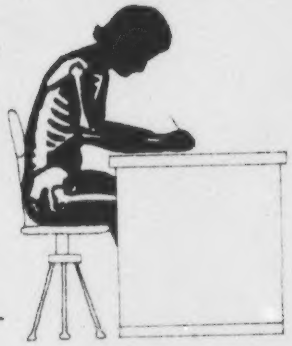
b. ____



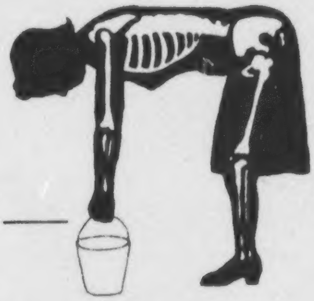
c. ____



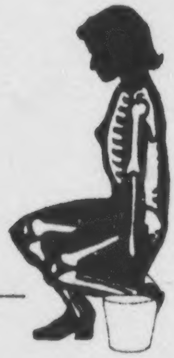
d. ____



e. ____



f. ____



24. Locate the sinuses in the skull.

25. Demonstrate the ability to apply principles of body mechanics.

(NOTE: If activities 24 and 25 have not been finished before the test, ask your instructor when they should be completed.)

MUSCULOSKELETAL SYSTEM
UNIT VII

ANSWERS TO TEST

1.	a.	7
	b.	2
	c.	3
	d.	5
	e.	6
	f.	8
	g.	9
	h.	4
	i.	1
	j.	10
2.	a.	4
	b.	1
	c.	2
	d.	5
	e.	3
	f.	9
	g.	7
	h.	11
	i.	6
	j.	10
	k.	8

3. a. B
   b. M
   c. B
   d. B
   e. B
   f. B
   g. M
   h. M
   i. M

4. a. 7
   b. 4
   c. 1
   d. 6
   e. 8
   f. 5
   g. 2
   h. 3

5. a. 3
   b. 1
   c. 4
   d. 2

6. a. Orbicularis oris
   b. Deltoid
   c. Pectoralis major
   d. Biceps brachii
   e. Orbicularis ocula
   f. Sternocleidomastoid
   g. Intercostals
   h. Rectus abdominis
   i. External oblique
   j. Internal oblique
   k. Vastus lateralis

l. Vastus intermedius
m. Vastus medialis
n. Tibialis anterior
o. Sternocleidomastoid
p. Trapezius
q. Deltoid
r. Latissimus dorsi
s. Aponeurosis
t. Gluteus medius
u. Gluteus maximus
v. Gastrocnemius
w. Achilles tendon
x. Triceps brachii
y. Olecranon process
z. Biceps femoris

7. a. Exercise regularly and sensibly
b. Avoid carrying loads which may cause strain
c. Learn to relax voluntary muscles at will
d. Rest sufficiently to relieve muscle fatigue
e. Use proper body mechanics at all times
f. Maintain an adequate diet
g. Maintain adequate oxygen supply

8. a. F
b. S
c. SE
d. I
e. L
f. I
g. S
h. L
i. F
j. L
k. L
l. F
m. I
n. L
o. F
p. L

9. a. AP
   b. AX
   c. AX
   d. AP
   e. AX

10. a. Sphenoid
    b. Nasal
    c. Zygomatic
    d. Frontal
    e. Parietal
    f. Temporal
    g. Maxillary
    h. Mandible
    i. Frontal
    j. Sphenoid
    k. Nasal
    l. Maxillary
    m. Mandible
    n. Parietal
    o. Temporal
    p. Zygomatic
    q. Occipital

11. a, c, d, f

12. a, b, d, e, f

13. a. Cranium
    b. Clavicle
    c. Sternum
    d. Xiphoid process
    e. Radius
    f. Ulna
    g. Carpals
    h. Metacarpals
    i. Phalanges
    j. Greater trochanter
    k. Pubis
    l. Ischium
    m. Patella
    n. Tibia
    o. Fibula
    p. Tarsals
    q. Metatarsals
    r. Phalanges
    s. Cervical vertebrae
    t. Scapula

u. Thoracic vertebrae
v. Ribs
w. Humerus
x. Lumbar vertebrae
y. Ilium
z. Sacrum
aa. Coccyx
bb. Femur
cc. Calcaneus

14. a. Cancellous bone
b. Compact bone
c. Periosteum
d. Endosteum
e. Bone marrow cavity
f. Epiphyseal cartilage
g. Epiphysis
h. Diaphysis
i. Articular cartliage

15. a, b, d, f, g

16. a. SM
b. I
c. FM
d. FM
e. SM
f. SM
g. FM

17. a, b, c, d, e, f, g

18. a. 4
b. 1
c. 5
d. 2
e. 6
f. 7
g. 3
h. 9
i. 8
j. 11
k. 10
l. 12
m. 13
n. 14

19. a. Skin and other tissues torn to expose bone protruding through the surface
b. Fracture that is incomplete, with the bone splitting
c. Fracture where there is more than one break and there are fragments of bone around the bone

d. Fracture in which the bone has been twisted and the break line leads up and around the bone

e. Fracture where the bone has broken but the skin has not broken

f. Fracture where the ends of the broken bones are jammed together

20. a. 2

b. 3

c. 1

d. 4

21. a, b, c, d, e, f, g

22. Any six of the following:

a. Broaden base of support by standing with feet slightly apart to give more balance and stability

b. Maintain good alignment of body parts to reduce strain and fatigue

c. Change position and type of activity to help maintain muscle tone and lessen fatigue

d. Carry weight close to body to use less effort

e. Improve circulation in legs and feet and reduce muscle strain by using proper body alignment while sitting

f. Pull, slide, or roll object rather than lift it to use less effort

g. Move heavy objects on a smooth surface rather than on a wrinkled or rough surface

h. Use mechanical devices whenever possible to lift and turn heavy or helpless patients

i. Encourage patients to help themselves as much as possible

23. b, c, f

24. Evaluated to the satisfaction of the instructor

25. Performance skills evaluated to the satisfaction of the instructor

RESPIRATORY SYSTEM
UNIT VIII

UNIT OBJECTIVE

After completion of this unit, the student should be able to assist in treatment and education of patients with conditions of the respiratory system. The student should also be able to obtain a throat culture. This knowledge will be evidenced through completion of job sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the respiratory system to the correct definitions.
2. Describe respiration.
3. Identify structures of the respiratory system.
4. Select from a list functions of the nasal cavities.
5. Match structures of the pharynx to the correct descriptions.
6. Distinguish between functions of the pharyngeal and laryngeal structures.
7. Distinguish between functions of the bronchi and bronchial structures, and trachea.
8. Describe the structure of the lungs.
9. Discuss practical ways to protect the respiratory system.
10. Match common diseases, disorders, and related procedures concerning the respiratory system to the correct definitions.
11. Select from a list reasons for administering oxygen in the medical office.
12. Select from a list ways to prevent upper respiratory infections.
13. Demonstrate the ability to:
    a. Obtain a throat culture.
    b. Prepare an oxygen cylinder for use.
    c. Prepare a piped-in oxygen unit for administration.
    d. Use a nasal cannula and mask.

RESPIRATORY SYSTEM
UNIT VIII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and job sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information sheet.

   F. Invite Laryngectomy Club members to visit and speak to class on their activities.

   G. Invite the State Lung Association to bring any equipment, pamphlets and speak to class on their functions in promoting a healthy system.

   H. Visit a respiratory therapy department and have various types of equipment that may be used in the medical office demonstrated.

   Examples: Oxygen therapy, vital capacity unit, IPPB machines

   I. Use animal respiratory organs to demonstrate structure and physiology.

   J. Provide equipment to complete job sheet.

   K. Demonstrate and discuss procedures outlined in job sheet.

   L. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--The Respiratory Tract

      2. TM 2--Nasal Cannula and Oxygen Mask

   D. Job sheets

      1. Job Sheet #1--Obtain a Throat Culture

      2. Job Sheet #2--Prepare an Oxygen Cylinder for Use

3. Job Sheet #3--Prepare a Piped-In Oxygen Unit for Administration

4. Job Sheet #4--Use a Nasal Cannula and Mask

E. Test

F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, Stillwater, Oklahoma, 1978.

B. Memmler, Ruth, and Wood, Dena. *The Human Body in Health and Disease.* Philadelphia: J. B. Lippincott Company, 1977.

C. Thomas, Clayton L., M.D., ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F. A. Davis Company, 1977.

IV. Additional materials:

A. Films:

1. "Mechanisms of Breathing." Encyclopedia Brittanica Films, 425 N. Michigan Ave., Chicago, Illinois 60611.

2. "I am Joe's Lung." Color, 25 minutes. Pyramid Films. 1975. Available from Pyramid Films, 2801 Colorado Avenue, Santa Monica, California 90404.

(NOTE: This film is also available to Oklahoma teachers *only* from the Curriculum and Instructional Materials Center, State Department of Vocational and Technical Education, 1515 W. 6th, Stillwater, Oklahoma 74074. Out-of-state teachers must order from the addresses listed.)

B. Filmstrips:

1. "Cooling the Common Cold." Trainex Corporation, P. O. Box 116, Garden Grove, California 92642.

2. "Smoking." Trainex Corporation, P. O. Box 116, Garden Grove, California 92642.

C. Polar Motion Transparency with Motion--"Pulmonary and Systemic Circulation." Available from American Animation, Inc., 6 East Spruce St., P. O. Box 335, Moorestown, NJ 08157.

(NOTE: This transparency is also available for purchase from Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 W. 6th Avenue, Stillwater, OK 74074.)

RESPIRATORY SYSTEM
UNIT VIII

INFORMATION SHEET

I. Terms and definitions

A. Adenoids--Masses of lymphoid tissue found in the nasopharynx

B. Cilia--Hairlike processes projecting from epithelial cells

C. Eustachian tubes--Passageways which connect middle ear to pharynx

D. Expiration--Expulsion of air from lungs

(NOTE: When diaphragm and intercostal muscles relax, the lungs are compressed and the air flows out.)

E. External respiration--Exchange of oxygen for carbon dioxide within alveoli of lungs

F. Hyperventilation--Abnormally rapid, shallow breathing; ventilation with inadequate exchange of gases

G. Inhalation therapy--Program for prevention and treatment of respiratory and circulatory dysfunctions

H. Inspiration--Drawing of air into lungs

(NOTE: Diaphragm and intercostal muscles contract, creating a vacuum, and air rushes in to inflate lungs.)

I. Intermittent positive pressure breathing (IPPB)--Providing oxygen, compressed air, CO_2 and/or other medication under increased pressure using special respirator

J. Internal respiration--Exchange of oxygen for carbon dioxide within cells

K. Larynx--Voice box

L. Pharynx--Muscular passageway which transports food and liquids into the esophagus and air into lungs

M. Respiration--Exchange of oxygen for carbon dioxide in the body

N. Sinuses--Eight cavities in the skull connected with nasal cavities

O. Tonsils--Masses of lymphoid tissue found in the oropharynx

P. Ventilation--Oxygen supplied to body through lungs

Q. Vital capacity--Volume of air that can be expelled following full inspiration

INFORMATION SHEET

II. Respiration

   A. Supplies oxygen to individual tissue cells

   B. Removes carbon dioxide, the gaseous waste product

III. Structures of the respiratory system (Transparency 1)

   A. Frontal sinus

   B. Nasal cavity

   C. Sphenoidal sinus

   D. Nasopharynx

   E. Oropharynx

   F. Epiglottis

   G. Laryngeal pharynx

   H. Larynx and vocal folds

   I. Trachea

   J. Lungs

   K. Bronchi

   L. Pleural cavity

   M. Diaphragm

   N. Terminal bronchiole

   O. Alveoli

IV. Functions of the nasal cavities

   A. Remove dust particles and bacteria

   B. Warm and moisten air before it reaches lungs

   C. Provide sense of smell

V. Structures of the pharynx (Job Sheet #1)

   A. Nasopharynx--Upper portion containing adenoids

   B. Oropharynx--Middle section behind mouth, containing tonsils and openings of eustachian tubes

INFORMATION SHEET

C. Laryngeal pharynx--Lower section with openings to larynx and esophagus

VI. Functions of pharyngeal and laryngeal structures

- A. Pharyngeal structures
  1. Pharynx serves as passageway for food, fluids, and air
  2. Adenoids and tonsils serve as filters for microorganisms and other foreign substances
  3. Eustachian tubes equalize pressure in middle ear
- B. Laryngeal structures
  1. Larynx
     - a. Serves as passageway for air only
     - b. Produces sound (voice)
  2. Epiglottis prevents food from entering larynx

VII. Functions of the bronchi and bronchial structures, and trachea

- A. Bronchi and bronchial structures
  1. Passageway of oxygen to alveoli
  2. Exchange of gases (oxygen and carbon dioxide)
- B. Trachea
  1. Conduction of air to and from lungs
  2. Transportation of inhaled foreign particles out of body by cilia

VIII. Structure of the lungs

- A. Shaped like cones which nearly fill chest cavity

  (NOTE: Top of the lung is called the apex; the lower part is called the base. The right lung has three lobes and the left has two.)
- B. Made of spongy tissue filled with alveoli, nerves, and blood and lymph vessels
- C. Covered by smooth, double-layered sac, pleura, which provides moisture to prevent friction during movement

INFORMATION SHEET

IX. Practical ways to protect the respiratory system

A. Maintain a beneficial environment

Examples: Maintain an optimum temperature; dress according to weather conditions; maintain proper humidity level; maintain proper filtering of air to remove dust and pollen; avoid drafts

B. Decrease smoking or stop entirely

C. Use aerosol sprays carefully

D. Use prescribed medicines properly

E. Exercise properly

F. Treat respiratory ailments promptly

X. Common diseases, disorders, and related procedures concerning the respiratory system

A. Apnea--Temporary cessation of breathing

B. Dyspnea--Difficult or labored breathing

C. Anoxia--Lack of oxygen

D. Asphyxia--Increase in carbon dioxide in tissues resulting in oxygen deficiency

E. Cyanosis--Bluish color of skin caused by insufficient amount of oxygen in blood

F. Sinusitis--Inflammation of the sinuses

G. Epistaxis--Nosebleed

H. Upper respiratory infection--Any infection which is confined to the nose, throat, larynx, or trachea

(NOTE: This condition may be charted as URI.)

I. Pneumonia--Inflammation of the lungs caused mainly by bacteria, chemical irritants, and viruses

J. Bronchitis--Infection of the bronchi and divisions of the lungs

K. Emphysema--Disease in which the alveoli become distended due to bronchial obstruction and the tubes lose elasticity, causing difficulty in breathing and damage to the heart

INFORMATION SHEET

L. Tuberculosis--Inflammation caused by a tubercle bacillus that causes necrosis, abscesses, fibrosis and calcification; usually found in respiratory system but can attack other body systems

M. Acute coryza--Scientific name for the common cold

N. Influenza--Acute contagious disease causing inflammation of the upper respiratory system accompanied by general aches and pains

(NOTE: This disease is caused by a virus and can be quite dangerous if it develops into pneumonia.)

O. Pleurisy--Inflammation of serous membrane surrounding lungs, usually accompanied by infection inside lung

P. Asthma--Sensitivity to allergens such as dust, pollens, foods, animal fur, causing watery discharge from the eyes and nose, difficulty in breathing, wheezing

Q. Bronchoscopy--Exam using a tubular instrument so that the bronchus can be seen

R. Tracheostomy--Cutting into the trachea to insert a tube to overcome some obstruction blocking breathing

S. Tonsillectomy--Surgical removal of the tonsils

T. Laryngectomy--Surgical removal of the larynx, usually as a result of cancer of the larynx and beyond

U. Oxygen administration--Supplying O_2 through various methods for therapeutic treatment or in emergencies

XI. Reasons for administering oxygen in the medical office (Transparency 2; Job Sheets #2, #3, and #4)

(NOTE: There are many reasons why O_2 may be used in a medical office. Listed below are some of the common conditions where O_2 would be needed.)

A. Cardiac arrest

B. Respiratory arrest

C. Drug reaction

D. Reaction to surgical procedures, treatment, or other activities that might produce cyanosis, dizziness, and breathing problems

E. Allergies

F. Respiratory or cardiovascular diseases or disorders

Examples: Emphysema, congestive heart

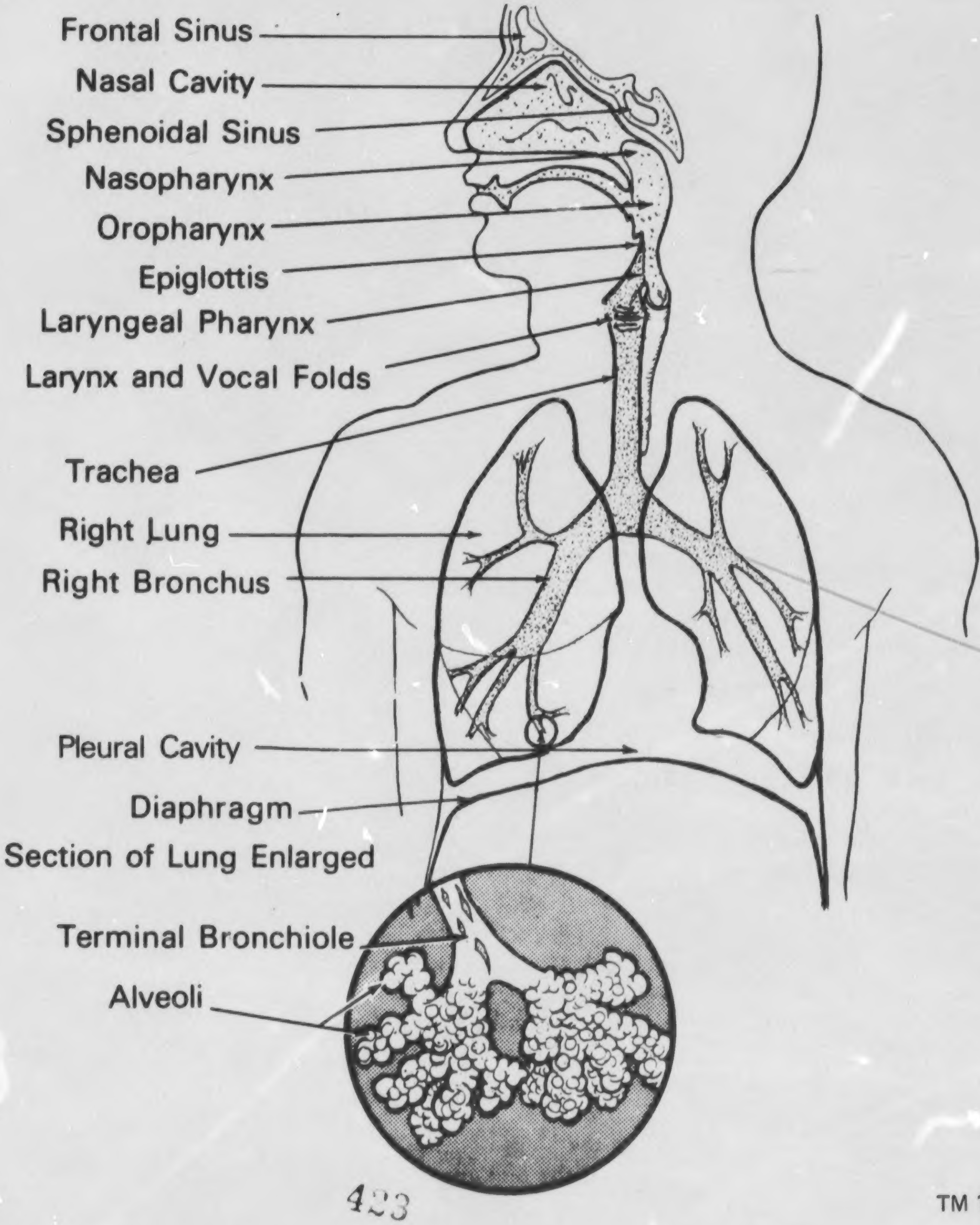
INFORMATION SHEET

XII. Ways to prevent upper respiratory infections

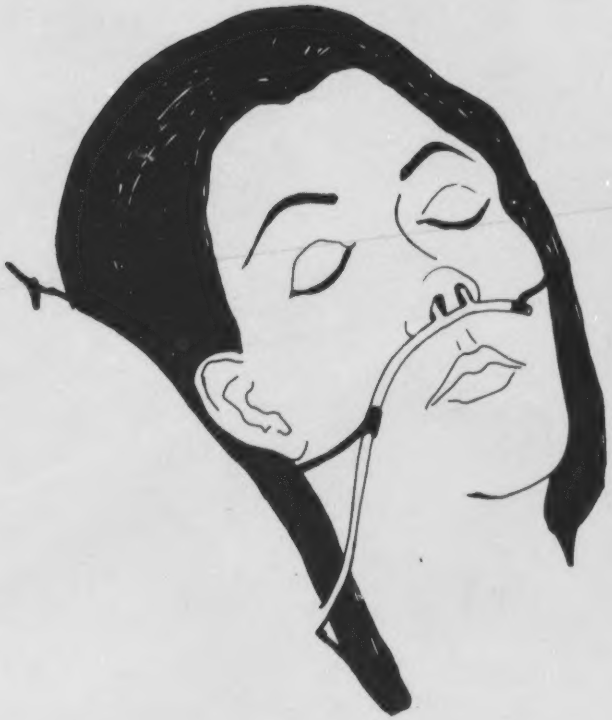
- A. Avoid excesses in smoking and consumption of alcohol
- B. Avoid chilling of the skin
- C. Avoid contaminated, irritating air
- D. Humidify the air in your home to prevent drying of the mucous membranes of the respiratory organs
- E. Practice good health habits such as nutritious diet, exercise, and adequate rest and sleep
- F. Avoid using same straws, cups, tissues, and other personal articles that someone else has used

MA - 337-B

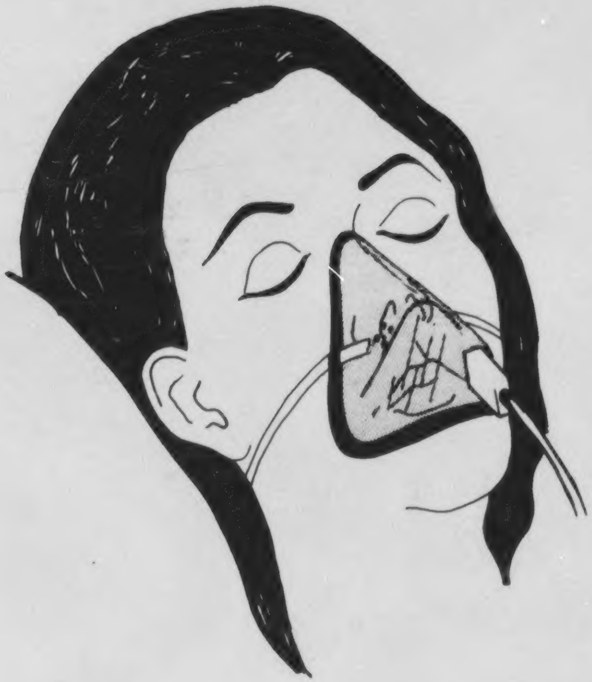
The Respiratory Tract


Frontal Sinus
Nasal Cavity
Sphenoidal Sinus
Nasopharynx
Oropharynx
Epiglottis
Laryngeal Pharynx
Larynx and Vocal Folds
Trachea
Right Lung
Right Bronchus
Pleural Cavity
Diaphragm
Section of Lung Enlarged
Terminal Bronchiole
Alveoli

Nasal Cannula and Oxygen Mask



Cannula



Oxygen Mask

RESPIRATORY SYSTEM
UNIT VIII

JOB SHEET #1- OBTAIN A THROAT CULTURE

(NOTE: The medical assistant many times will be responsible for obtaining a throat culture to determine the infective bacteria and sensitivity. The specimen will either be incubated and read in the office or taken to a special laboratory for more specific tests.)

I. Equipment

  A. Culture swab(s)

  (NOTE: Many offices will have the sterilized swabs that have a type of preservative in the swab container, while others prefer to use just the pre-sterilized swabs and take them immediately to the lab and the specimen plates.)

  B. Tongue blade, if needed, to stabilize tongue

  C. Requisition and/or label

  (NOTE: Make sure if there is a culture and sensitivity to be done that the correct forms are filled out.)

  D. Culture media plates

  (NOTE: Depending on what type of test is to be done, special media will be prepared and ready in plates or test tubes.)

  Examples: Blood agar, chocolate agar

II. Procedure

  A. Wash hands

  B. Assemble equipment

  C. Fill out label or requisition that will accompany specimen container

  D. Explain procedure to patient to assure full cooperation

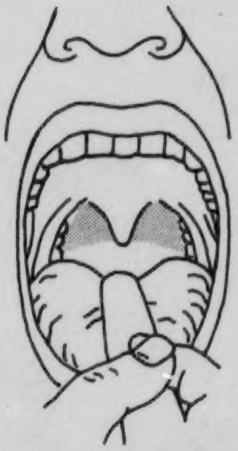
  E. Instruct patient to open mouth wide with tongue extending from mouth

JOB SHEET #1

F. Observe the throat to determine areas that will produce the best specimen (Figure 1)

(NOTE: These areas might include either side of the throat and/or the tonsils.)

FIGURE 1



Used with permission of the F.A. Davis Company from ***Taber's Cyclopedic Medical Dictionary,*** 13th ed., copyright 1977, page M-65.

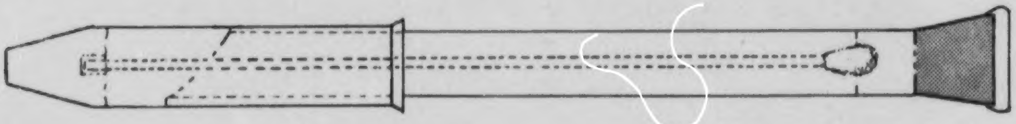
G. Remove the swab carefully from the container, taking care not to contaminate it by touching the cotton end to the outside of the container or your fingers

H. Gently direct the swab to the area of the throat to be used and, using a rolling action, collect the specimen

(NOTE: It is especially necessary to be gentle, as the patient's throat will be very inflammed and sore already, and further injury should be avoided. Many patients with a very active gag reflex will respond to the swab's movement and will be stimulated to cough. Be aware of this and move quickly.)

I. Replace the swab in a specially prepared container in the solution provided, following manufacturer's instructions (Figure 2)

FIGURE 2



JOB SHEET #1

J. Attach label or requisition to take to laboratory area for safekeeping

K. Place specimen in media plate or tube as soon as possible if a preservative swab tube has not been used

(NOTE: Follow directions on what procedure to follow for what type of media you are using.)

L. Plates will be placed in an incubation unit and left for at least 24 hours before being read; temperature will usually depend on what type of media is used

M. Indicate on patient's chart that this procedure has been completed

N. Explain to the patient that it wil take at least 24 hours before specimen can be evaluated

RESPIRATORY SYSTEM
UNIT VIII

JOB SHEET #2--PREPARE AN OXYGEN CYLINDER FOR USE

(NOTE: In many medical offices oxygen is kept for many types of emergency and therapeutic treatment. Become familiar with the use of equipment in your office.)

I. Equipment

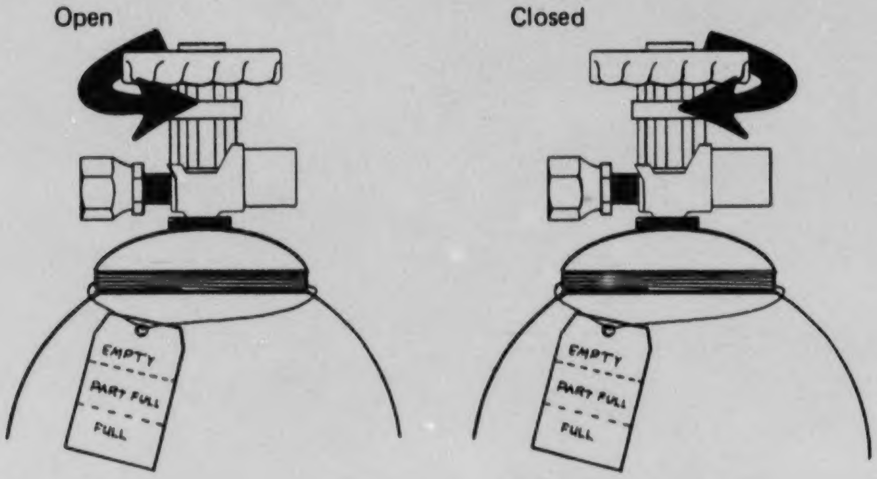
- A. Cylinder of oxygen
- B. Regulator
- C. Wrench
- D. Humidifier
- E. Tubing

II. Procedure to prepare for use

- A. Assemble equipment
- B. Remove protective cap from cylinder
- C. Open cylinder valve slightly for a very short time (Figure 1)

  (NOTE: This is called "cracking" the valve. It blows out any dust particles which may have collected.)

FIGURE 1



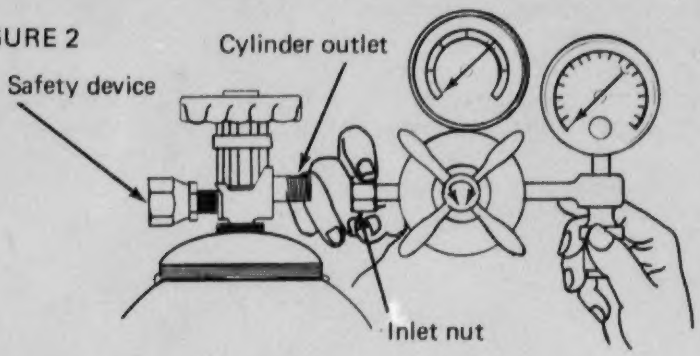
Open

Closed

JOB SHEET #2

D. Connect regulator to cylinder outlet on cylinder valve (Figure 2)

FIGURE 2


Safety device
Cylinder outlet
Inlet nut

E. Tighten inlet nut with wrench (Figure 3)

(NOTE: Wrench is usually fastened to oxygen carrier with chain.)

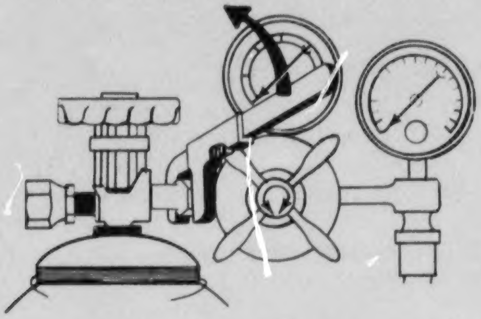
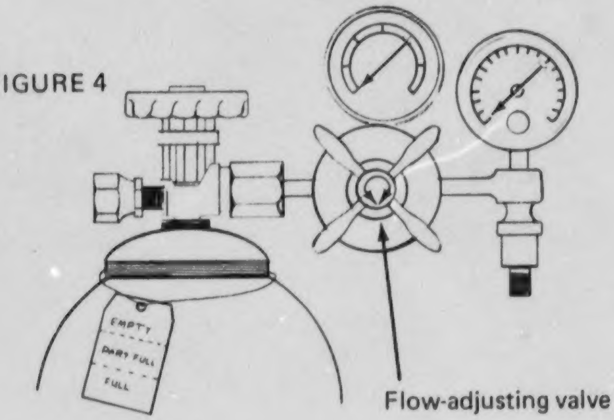


FIGURE 3

F. Turn flow-adjusting valve on "OFF" position (Figure 4)

FIGURE 4


EMPTY
PART FULL
FULL
Flow-adjusting valve

JOB SHEET #2

G. Remove cover from humidifier

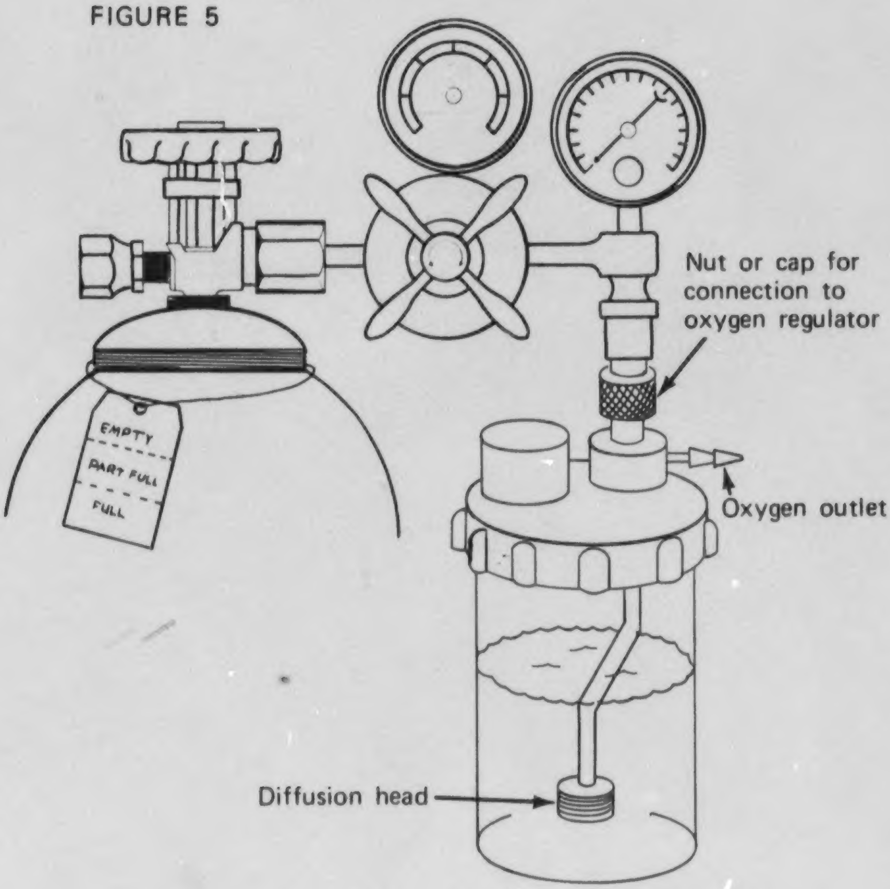
H. Fill humidifier with distilled water to indicated water level

(NOTE: If there is no water level mark, fill humidifier half full.)

I. Replace cover on humidifier

J. Attach humidifier to regulator (Figure 5)

FIGURE 5


EMPTY
PART FULL
FULL
Nut or cap for connection to oxygen regulator
Oxygen outlet
Diffusion head

K. Attach tubing to oxygen outlet

JOB SHEET #2

L. Open cylinder valve very slowly to avoid damaging regulator (Figure 6)

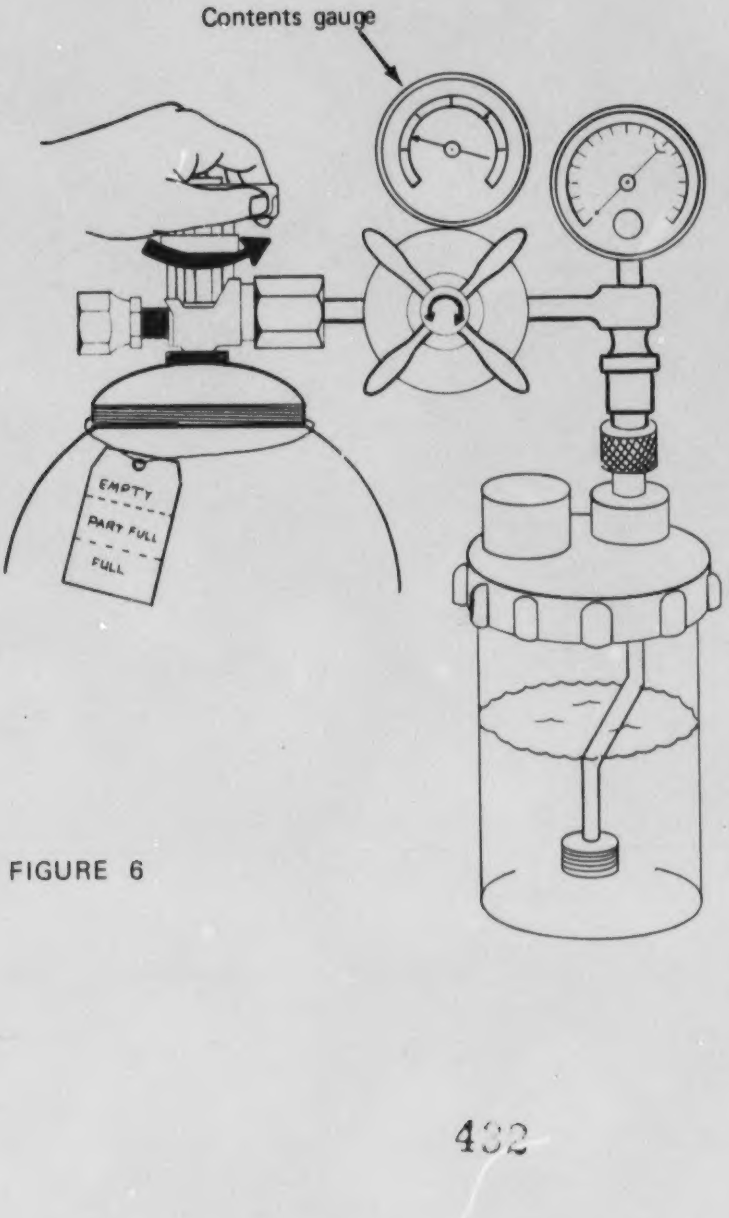
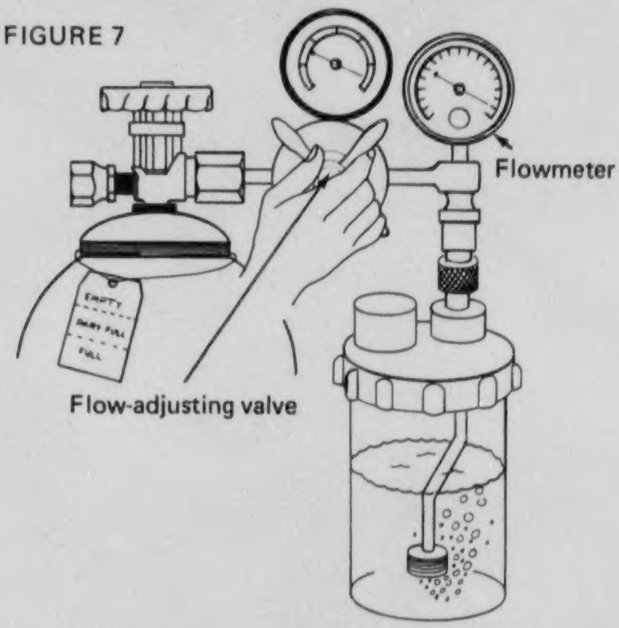

Contents gauge
EMPTY
PART FULL
FULL

FIGURE 6

JOB SHEET #2

M. Turn flow-adjusting valve to "ON" position (Figure 7)

FIGURE 7



N. Continue turning flow-adjusting valve until flowmeter registers the prescribed number of liters per minute

(NOTE: Cylinder and regulator are now ready for use.)

III. Procedure to discontinue use

(NOTE: Follow this procedure when oxygen use is to be discontinued for thirty minutes or more and/or when regulator is to be removed from the cylinder.)

A. Close cylinder valve tightly

B. Wait until flowmeter and cylinder contents gauge have returned to zero

C. Close flow-adjusting valve

D. Remove humidifier

E. Loosen inlet nut with wrench

F. Remove regulator

G. Replace protective cap

H. Clean equipment and return to proper place

RESPIRATORY SYSTEM
UNIT VIII

JOB SHEET #3--PREPARE A PIPED-IN OXYGEN UNIT FOR ADMINISTRATION

I. Equipment

   A. Flowmeter

   B. Humidifier

   C. Tubing

II. Procedure to prepare for use

   A. Assemble equipment

   B. Remove cover on humidifier

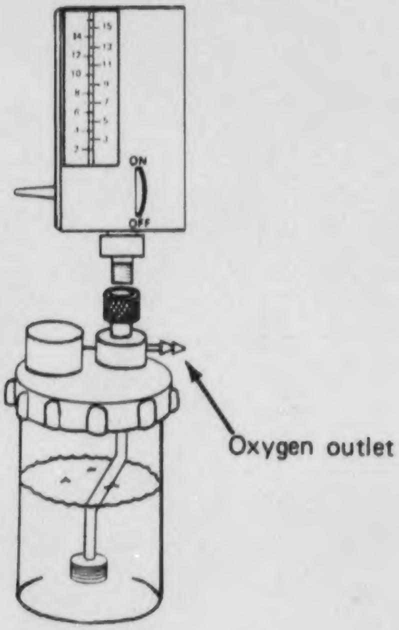
   C. Fill humidifier with distilled water to prescribed level

   (NOTE: If there is no water-level mark, fill humidifier half full.)

   D. Replace cover on humidifier

   E. Attach humidifier to flowmeter (Figure 1)

FIGURE 1



   F. Take equipment to patient area

JOB SHEET #3

G. Turn flow-adjusting valve to "OFF" position (Figure 2)

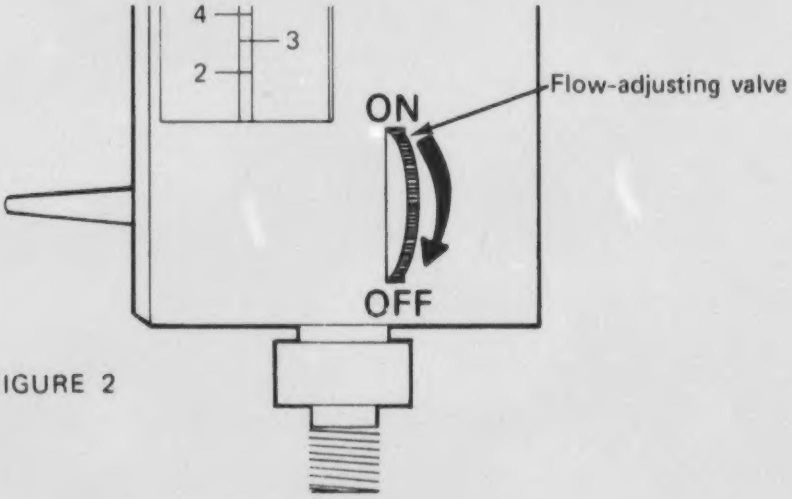
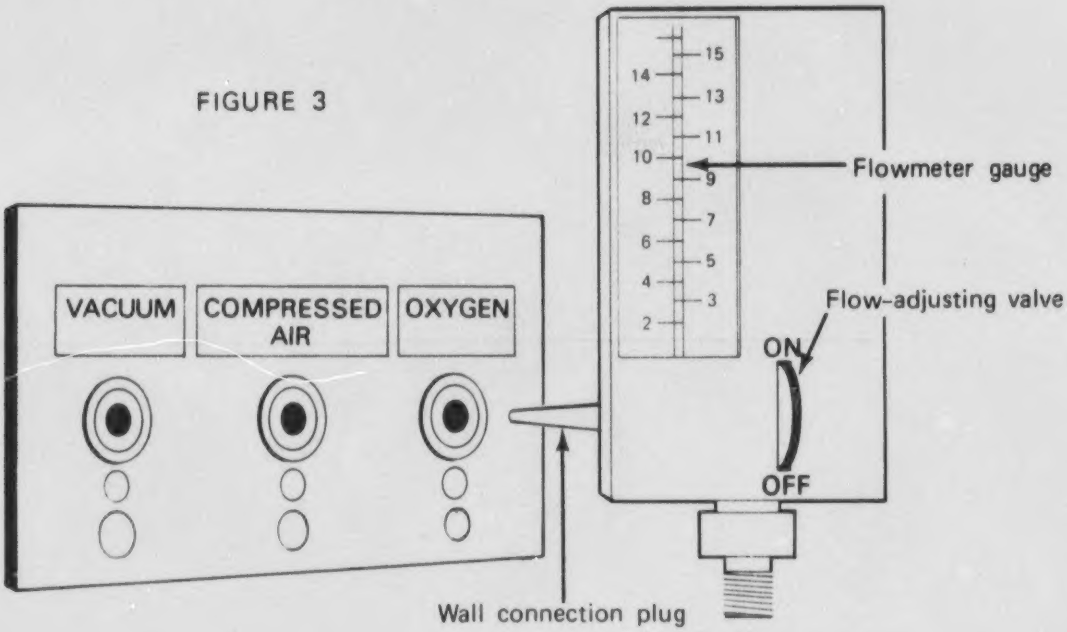

4
3
2
Flow-adjusting valve
ON
OFF

FIGURE 2

H. Insert flowmeter adapter into opening of outlet, pressing firmly to secure until it snaps into place (Figure 3)

FIGURE 3


15
14
13
12
11
10
9
8
7
6
5
4
3
2
Flowmeter gauge
Flow-adjusting valve
ON
OFF
VACUUM
COMPRESSED AIR
OXYGEN
Wall connection plug

JOB SHEET #3

I. Attach tubing to oxygen outlet (Figure 4)

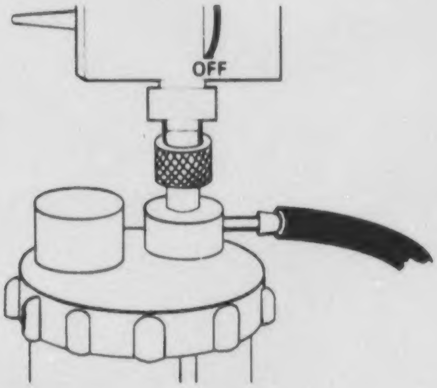


FIGURE 4

J. Slowly open flow-adjusting valve until desired flow is obtained

(NOTE: Oxygen is now ready for use.)

III. Procedure to discontinue use

A. Turn flow-adjusting valve to "OFF"

B. Wait until gauge drops to zero

C. Remove flowmeter from outlet by releasing locking mechanism

D. Clean equipment and return to proper place

RESPIRATORY SYSTEM
UNIT VIII

JOB SHEET #4--USE A NASAL CANNULA AND MASK

I. Equipment

  A. Oxygen setup

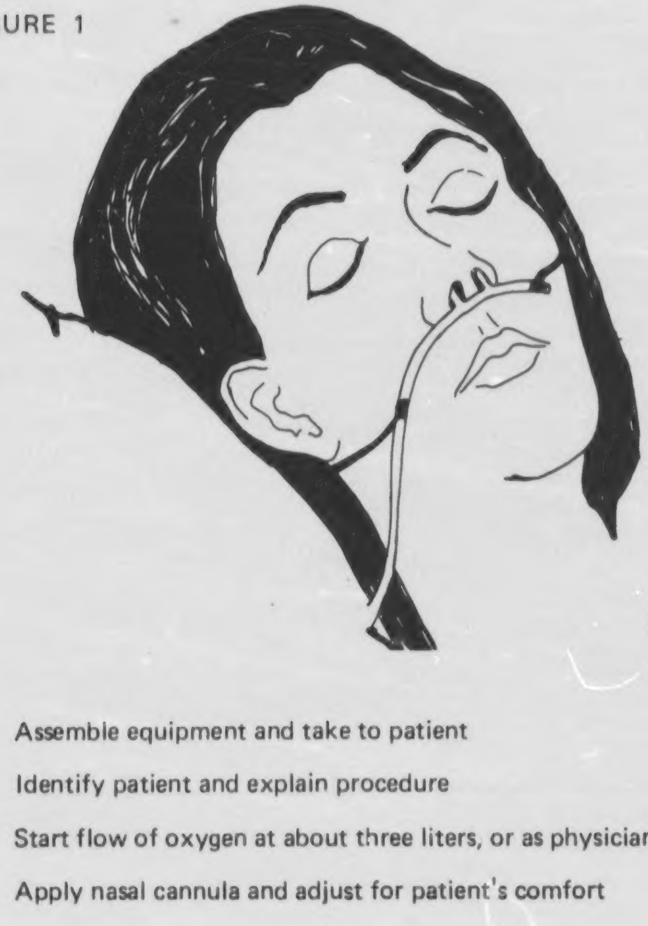
  (NOTE: Prepare oxygen setup using instructions on Job Sheet #2 or #3.)

  B. Nasal cannula

  C. Mask

II. Procedure for nasal cannula (Figure 1)

FIGURE 1



Nasal Cannula

  A. Assemble equipment and take to patient

  B. Identify patient and explain procedure

  C. Start flow of oxygen at about three liters, or as physician indicates

  D. Apply nasal cannula and adjust for patient's comfort

JOB SHEET #4

E. Adjust rate of flow to prescribed number of liters per minute

F. Check frequently for

  1. Cannula position
  2. Rate of oxygen flow
  3. Water level in humidifier
  4. Patency of tubing
  5. Leaks in connections
  6. Quantity of oxygen remaining in cylinders

G. Observe patient's reaction and respond accordingly

(NOTE: Patient's breathing should be less labored, and color should improve.)

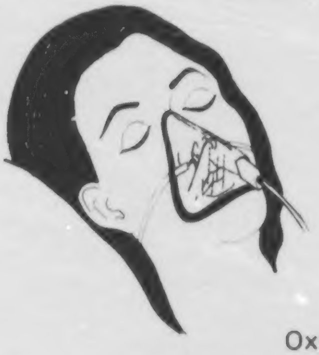
H. Discontinue use when physician indicates

  1. Remove nasal cannula
  2. Shut off oxygen supply
  3. Clean and return equipment to proper place

I. Record on chart that O_2 was given, how, for what reason, and reaction

III. Procedure for mask (Figure 2)

FIGURE 2



Oxygen Mask

A. Assemble and take to patient area

B. Identify patient and explain procedure

C. Attach tubing from face mask to oxygen outlet

JOB SHEET #4

D. Start oxygen flow at a high rate, fourteen to fifteen liters per minute

(NOTE: Most patients breathe more deeply and rapidly when mask is first applied. If the oxygen flow is initially too low, the patient may not be getting enough oxygen.)

E. Adjust face mask

F. Secure straps so mask fits snugly, but not tightly enough to hamper circulation

G. Check for oxygen leaking around edges of the mask; if necessary, place a piece of dampened gauze or cotton in leaking areas

H. Readjust rate of flow to prescribed level

I. Remove mask and dry patient's face when needed

J. Check frequently for

   1. Position of face mask
   2. Rate of flow of oxygen
   3. Water level in humidifier
   4. Patency of tubing
   5. Leaks in connections
   6. Quantity of oxygen remaining in cylinders

K. Observe patient's reaction and respond accordingly

L. Discontinue use when physician indicates

M. Record on chart that O_2 was given, how, for what reason, and reaction

RESPIRATORY SYSTEM
UNIT VIII

TEST

NAME____________________________________ SCORE____________________

1. Match terms associated with the respiratory system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Hairlike processes projecting from epithelial cells

_____b. Voice box

_____c. Exchange of oxygen for carbon dioxide within alveoli of lungs

_____d. Masses of lymphoid tissue found in the nasopharynx

_____e. Abnormally rapid, shallow breathing; ventilation with inadequate exchange of gases

_____f. Eight cavities in the skull connected with nasal cavities

_____g. Masses of lymphoid tissue found in the oropharynx

_____h. Program for prevention and treatment of respiratory and circulatory dysfunctions

_____i. Muscular passageway which transports food and liquids into the esophagus and air into lungs

_____j. Exchange of oxygen for carbon dioxide within cells

_____k. Expulsion of air from lungs

_____l. Drawing of air into lungs

_____m. Providing oxygen, compressed air, CO_2 and/or other medication under increased pressure using special respirator

_____n. Passageways which connect middle ear to pharynx

1. Intermittent positive pressure breathing (IPPB)
2. Larynx
3. Hyperventilation
4. Inspiration
5. Tonsils
6. External respiration
7. Cilia
8. Inhalation therapy
9. Respiration
10. Eustachian tubes
11. Sinuses
12. Adenoids
13. Pharynx
14. Internal respiration
15. Ventilation
16. Expiration
17. Vital capacity

_____o. Oxygen supplied to body through lungs

_____p. Exchange of oxygen for carbon dioxide in the body

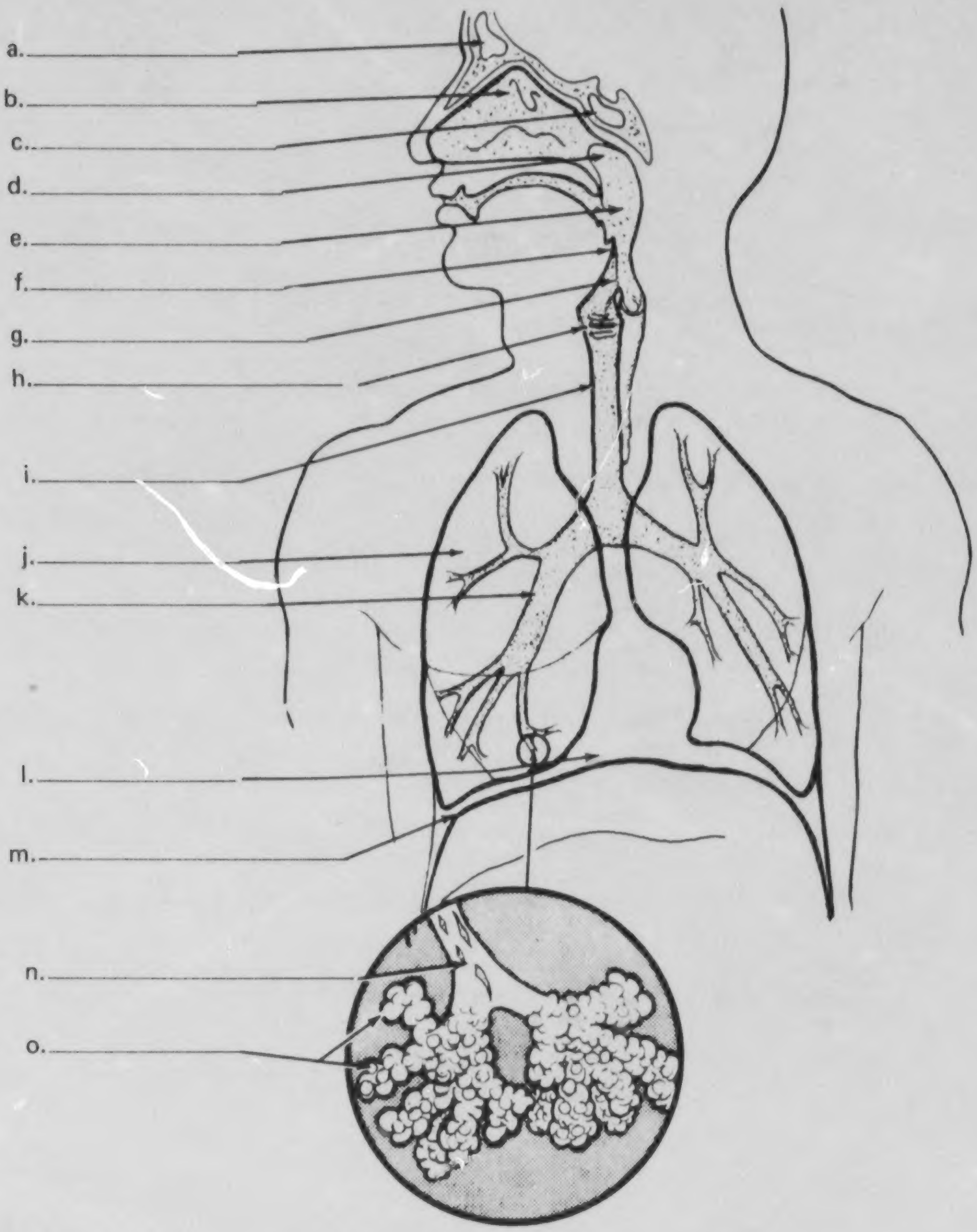
_____q. Volume of air that can be expelled following full inspiration

2. Describe respiration.

____

____

3. Identify structures of the respiratory system. Write the correct terms in the blanks provided.



Lung
Frontal sinus
Nasal cavity
Laryngeal pharynx
Terminal bronchiole
Epiglottis
Larynx and vocal folds
Nasopharynx
Oropharynx
Diaphragm
Trachea
Pleural cavity
Bronchi
Alveoli
Sphenoidal sinus

4. Select from the following list functions of the nasal cavities. Mark each correct answer with an "X."

______a. Provide sense of smell

______b. Indicate colds

______c. Remove dust particles and bacteria

______d. Prevent choking

______e. Warm and moisten air before it reaches lungs

5. Match structures of the pharynx to the correct definitions. Place the correct numbers in the blanks provided.

______a. Lower section with openings to larynx and esophagus

______b. Upper portion containing adenoids

______c. Middle section behind mouth, containing tonsils and openings of eustachian tubes

1. Laryngeal pharynx
2. Nasopharynx
3. Oropharynx

6. Distinguish between functions of the pharyngeal and laryngeal structures. Place a "P" for pharyngeal and an "L" for laryngeal in the correct blanks.

______a. Eustachian tubes equalize pressure in middle ear

______b. Serves as passageway for air only

______c. Produces sound (voice)

______d. Adenoids and tonsils serve as filters for microorganisms and other foreign substances

______e. Pharynx serves as passageway for food, fluids, and air

7. Distinguish between functions of the bronchi and bronchial structures, and trachea. Place a "B" for bronchi and bronchial structures, and a "T" for trachea in the correct blanks.

______a. Transporation of inhaled foreign particles out of body by cilia

______b. Exchange of gases (oxygen and carbon dioxide)

______c. Passageway of oxygen to alveoli

______d. Conduction of air to and from lungs

8. Describe the structure of the lungs.

____

____

____

____

9. Discuss practical ways to protect the respiratory system.

____

____

____

____

____

____

10. Match common diseases, disorders, and related procedures concerning the respiratory system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Infection of the bronchi and divisions of the lungs

_____b. Scientific name for the common cold

_____c. Lack of oxygen

_____d. Nosebleed

_____e. Acute contagious disease causing inflammation of the upper respiratory system accompanied by general aches and pains

_____f. Inflammation of the lungs caused mainly by bacteria, chemical irritants, and viruses

_____g. Difficult or labored breathing

_____h. Inflammation of the sinuses

_____i. Inflammation caused by a tubercle bacillus that causes necrosis, abscesses, fibrosis and calcification; usually found in respiratory system but can attack other body systems

_____j. Any infection which is confined to the nose, throat, larynx, or trachea

1. Epistaxis
2. Upper respiratory infection
3. Sinusitis
4. Tuberculosis
5. Dyspnea
6. Pneumonia
7. Anoxia
8. Acute coryza
9. Influenza
10. Bronchitis

______k. Disease in which the alveoli become distended due to bronchial obstruction and the tubes lose elasticity, causing difficulty in breathing and damage to the heart

______l. Temporary cessation of breathing

______m. Inflammation of serous membrane surrounding lungs, usually accompanied by infection inside lungs

______n. Surgical removal of the tonsils

______o. Sensitivity to allergens such as dust, pollens, foods, animal fur, causing watery discharge from eyes and nose, difficulty in breathing, wheezing

______p. Exam using a tubular instrument so that the bronchus can be seen

______q. Cutting into the trachea to insert a tube to overcome some obstruction blocking breathing

______r. Surgical removal of the larynx, usually as a result of cancer of the larynx and beyond

______s. Bluish color of skin caused by insufficient amount of oxygen in blood

______t. Increase in carbon dioxide in tissues resulting in oxygen deficiency

______u. Supplying O_2 through various methods for therapeutic relief and treatment or in emergencies

11. Pleurisy
12. Tonsillectomy
13. Tracheostomy
14. Laryngectomy
15. Apnea
16. Emphysema
17. Bronchoscopy
18. Asthma
19. Asphyxia
20. Cyanosis
21. Oxygen administration

11. Select from the following list reasons for administering oxygen in the medical office. Mark each correct answer with an "X."

______a. Allergies

______b. Respiratory or cardiovascular diseases or disorders

______c. Hyperventilation

______d. Drug reaction

______e. Respiratory arrest

______f. Cardiac arrest

______g. Reaction to surgical procedures, treatment, or other activities that might produce cyanosis, dizziness, and breathing problems

12. Select from the following list ways to prevent upper respiratory infections. Mark each correct response with an "X."

_____a. Avoid chilling of the skin

_____b. Humidify the air in your home to prevent drying of the mucous membranes of the respiratory organs

_____c. Use nosespray at the first sign of cold

_____d. Avoid excesses in smoking and consumption of alcohol

_____e. Avoid using same straws, cups, tissues, and other personal articles that someone else has used

_____f. Practice good health habits such as nutritious diet, exercise, and adequate rest and sleep

_____g. Avoid contaminated, irritating air

13. Demonstrate the ability to:

a. Obtain a throat culture.

b. Prepare an oxygen cylinder for use.

c. Prepare a piped-in oxygen unit for administration.

d. Use a nasal cannula and mask.

(NOTE: If the above activities have not been finished before the test, ask your instructor when they should be completed.)

RESPIRATORY SYSTEM
UNIT VIII

ANSWERS TO TEST

1. a. 7
   b. 2
   c. 6
   d. 12
   e. 3
   f. 11
   g. 5
   h. 8
   i. 13
   j. 14
   k. 16
   l. 4
   m. 1
   n. 10
   o. 15
   p. 9
   q. 17

2. Description should include:
   a. Supplies oxygen to individual tissue cells
   b. Removes carbon dioxide, the gaseous waste product

3. a. Frontal sinus
   b. Nasal cavity
   c. Sphenoidal sinus
   d. Nasopharynx
   e. Oropharynx
   f. Epiglottis
   g. Laryngeal pharynx
   h. Larynx and vocal folds
   i. Trachea
   j. Lung
   k. Bronchi
   l. Pleural cavity
   m. Diaphragm
   n. Terminal bronchiole
   o. Alveoli

4. a, c, e
5. a. 1
   b. 2
   c. 3
6. a. P
   b. L
   c. L
   d. P
   e. P
7. a. T
   b. B
   c. B
   d. T
8. Description should include:
   a. Shaped like cones which nearly fill chest cavity
   b. Made of spongy tissue filled with alveoli, nerves, and blood and lymph vessels
   c. Covered by smooth, double-layered sac, pleura, which provides moisture to prevent friction during movement
9. Discussion should include:
   a. Maintain a beneficial environment
   b. Decrease smoking or stop entirely
   c. Use aerosol sprays carefully
   d. Use prescribed medicines properly
   e. Exercise properly
   f. Treat respiratory ailments promptly

10. a. 10
    b. 8
    c. 7
    d. 1
    e. 9
    f. 6
    g. 5
    h. 3
    i. 4
    j. 2
    k. 16
    l. 15
    m. 11
    n. 12
    o. 18
    p. 17
    q. 13
    r. 14
    s. 20
    t. 19
    u. 21

11. a, b, d, e, f, g

12. a, b, d, e, f, g

13. Performance skills evaluated to the satisfaction of the instructor

INTEGUMENTARY SYSTEM
UNIT IX

UNIT OBJECTIVE

After completion of this unit, the student should be able to use knowledge of integumentary system to assist in diagnostic procedures, treatment, and patient education of the system. The student should also be able to apply a topical medication. This knowledge will be evidenced through completion of the assignment sheet, job sheet, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the integumentary system to the correct definitions.
2. Distinguish between layers of the skin.
3. Select from a list appendages of the skin.
4. Identify the parts of the skin.
5. Describe the functions of the integumentary system.
6. State principles for maintaining a healthy integumentary system.
7. List clinical characteristics of the skin that should be observed and reported.
8. Match common diseases, disorders, and procedures related to the integumentary system to the correct definitions.
9. Distinguish between degrees of burns.
10. Match first, second, and third degree burns to the correct treatments.
11. Use case studies to develop patient questioning techniques concerning the integumentary system.
12. Demonstrate the ability to apply a topical medication.

INTEGUMENTARY SYSTEM
UNIT IX

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information, assignment, and job sheets.

   C. Make transparency.

   D. Discuss unit and specific objectives.

   E. Discuss information and assignment sheets.

   F. Obtain pictures of skin conditions to reinforce information about types of diseases.

      Examples: Medical-surgical texts, specialized texts for dermatological medicine

   G. Invite a dermatologist to speak to class on dermatology, good skin care, or new treatments for various conditions.

   H. Take a field trip to a specialized burn center or invite a burn specialist to speak on initial treatment of burned victims, new treatments or medications, and rehabilitation for recovered patients.

   I. Roleplay using Assignment Sheet #1 to allow students to become more comfortable talking with patients and to learn to ask the appropriate questions.

   J. Demonstrate and discuss procedures outlined in job sheet.

   K. Provide equipment to allow for practice of job sheet skill.

      (NOTE: Students can use types of hand lotion, body creams, or other common over-the-counter products to practice with each other in applying a topical medication.)

   L. Obtain package inserts from topical medications for students to become familiar with the various types and their application.

   M. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency Master: TM 1--The Skin

D. Assignment Sheet #1--Use Case Studies to Develop Patient Questioning Techniques Concerning the Integumentary System

E. Job Sheet #1--Apply a Topical Medication

F. Test

G. Answers to test

III. Unit references:

A. Thomas, Clayton L., M.D., ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

B. Memmler, Ruth, and Wood, Dena. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Co., 1977.

C. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

IV. Filmstrips:

A. "Physical Assessment: The Skin and Extremities." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

B. "Clinical Dermatology." Available from Trainex Corporation.

C. "Topical Treatment of Burns." Available from Trainex Corporation.

INTEGUMENTARY SYSTEM
UNIT IX

INFORMATION SHEET

I. Terms and definitions

A. Dermatology--Study of the skin

B. Integumentary system--System pertaining to body covering; includes skin, hair, nails, and sweat glands

C. Epithelium--Cells that form outer layer of skin and surface layers of the mucous and serous membranes

D. Stratified--Arranged in layers

E. Cutaneous--Pertaining to the skin

F. Appendage--Anything attached to a larger or major part

G. Regeneration--Repair, regrowth, or restoration of a part

H. Squamous--Covered with or consisting of scales

I. Epidermis--Outermost layer of skin that is formed into layers

(NOTE: This makes up the epithelium.)

J. Subcutaneous tissue--Layer just under the skin made up of elastic and fibrous tissue

K. Melanin--Pigment granules that give the skin its color; found in the epidermis

L. Ceruminous glands--Secrete a waxy substance within the ear

M. Sebaceous or oil glands--Produce an oil secretion to keep the skin from becoming brittle or dry

N. Turgor--Normal tension in cell

II. Layers of the skin

A. Epidermis

1. Covers entire body
2. Stratified squamous epithelial cells
3. Aids in forming new cells
4. Contains melanin

INFORMATION SHEET

B. Dermis

1. Lies directly below epidermis
2. Framework consists of connective tissue
3. Contains blood vessels, nerves, lymph vessels, hair follicles, and sweat glands

C. Subcutaneous

1. Formed from elastic and fibrous tissues and deposits of fat
2. Acts to attach the dermis to underlying structures

III. Appendages of the skin

A. Hair

(NOTE: Hair is modified dead epidermal tissue.)

B. Nails

(NOTE: Nails are horny cutaneous plates.)

C. Sebaceous glands

D. Sweat glands

(NOTE: Sweat glands function by secreting body salts, waste products, and water.)

E. Ceruminous glands in ears

IV. Parts of the skin (Transparency 1)

A. Epidermis

B. Dermis (Corium)

C. Subcutaneous tissue

D. Sudoriferous (sweat) glands

E. Hair follicles

F. Sebaceous (oil) glands

G. Cutaneous nerve endings

INFORMATION SHEET

- H. Pore (sweat duct opening)
- I. Growing layer
- J. Blood vessels
- K. Fibrous connective tissue
- L. Adipose (fat) cells

V. Functions of the integumentary system

- A. Sensation
  - 1. Basic sensations
    - a. Pain
    - b. Temperature
    - c. Touch
    - d. Pressure
  - 2. Permits body to adjust to changes in weather
- B. Protection
  - 1. Forms an elastic covering for protection against external environment
  - 2. Prevents excessive loss of fluids and electrolytes
  - 3. Assists in preventing microorganisms from invading body
  - 4. Repels water
- C. Regulation of body temperature
  - 1. Evaporation of perspiration cools skin
  - 2. Adjustment in size of blood vessels increases or decreases heat loss
  - 3. Fatty tissues act as insulation to prevent heat loss
- D. Excretion of water, salt, and waste products

  (NOTE: Perspiration rids body of waste and helps to cool skin when moisture evaporates.)
- E. Formation of vitamin D when exposed to sun or ultraviolet light
- F. Secretion of oil to maintain elasticity and water resistance

INFORMATION SHEET

VI. Principles for maintaining a healthy integumentary system

A. Keep body clean

(NOTE: Be aware of the over promotion of many cosmetic products that do not do anything for your skin, hair and nails, and may even do damage.)

B. Drink six to eight glasses of water daily

C. Obtain enough sleep at night

D. Adjust diet to include recommended amounts of four basic food groups with special emphasis on foods containing vitamins A, C, and D

E. Expose body to fresh air and sunshine regularly

(CAUTION: Prevent overexposure of sun rays that can cause harmful conditions.)

F. Engage in exercise and physical activity regularly

G. Promote regular elimination habits

H. Take care of any cuts, abrasions, rashes, or other breaks in the skin promptly

VII. Clinical characteristics of the skin that should be observed and reported (Assignment Sheet #1)

A. Color of skin

Examples: Jaundice-yellowish color, cyanosis-bluish color, chronic poisonings may cause brown or greyish color, flushed-reddish

B. Skin injuries

Examples: Lesions, scratches, tears, bruises

C. Skin eruptions

Examples: Rash, pimples, blisters, warts

D. Skin texture

Examples: Dry, rough, smooth, wrinkled

E. Skin temperature

Examples: Hot, cool

(NOTE: Many times the skin will feel hot and dry, or cool and clammy. This may indicate a certain condition.)

INFORMATION SHEET

F. Skin turgor

Examples: Normal reflex tension, emaciated, swelling, edema or dehydration

VIII. Common diseases, disorders, and procedures related to the integumentary system

A. Macules--Rash in which spots are neither raised nor depressed

Example: Measles

B. Papules--Rash with firm raised areas; frequently occurs before the pustular stage and may be red in color

Examples: Chickenpox, pimples

C. Wheal--Elevation of skin that usually appears round or in a ridge that is white in center with pale red circling the area

Examples: Insect bites, TB skin tests

D. Pustule--Lesions that appear elevated; usually filled with lymph or pus

Examples: Acne, impetigo, smallpox

E. Vesicles--Small sacs or blisterlike eruptions that may contain different types of fluid

Examples: Chickenpox, scabies, herpes

(NOTE: Some diseases like chickenpox will go through several of these stages of eruptions before finishing their course.)

F. Impetigo--Acute contagious disease of staphylococcal or streptococcal infection that forms blisterlike lesions filled with pus

(NOTE: As an MA, it is very important that you take precautions against spreading or catching this disease. Remind parents that infected persons' linens, dishes and other personal articles should be kept separate. Strict cleansing of hands should be done to prevent spread of these organisms.)

G. Shingles--Disorder causing watery blisters to form along certain nerve paths; part of the herpes group

(NOTE: It is common to see shingles around the waist or lower trunk area, but they can occur in other areas of the body.)

H. Psoriasis--Eruption of dry, scaly, silvery patches, usually on arms, legs, scalp, ears, and over the sacrum

INFORMATION SHEET

I. Fungal infections--Skin eruptions made from tiny fungi that affect the skin and other appendages

Examples: Tinea pedis (Athlete's Foot), Tinea Capitis (Ringworm of the scalp), Tinea Corporis (Ringworm of the body), and Tinea Barbae (Ringworm of the beard)

J. Prutitus--Profuse itching that can be a symptom of many skin diseases without any visible skin lesions

K. Boils--Inflammation of subcutaneous layer of tissue, gland, or hair follicle caused by a local staphyloccal invasion

L. Ulceration--Loss of surface tissue due to death of cells, caused by various conditions

(NOTE: A decubitis is a bedsore and is an ulceration that can affect the skin.)

M. Cysts--Closed sacs or pouches that contain fluid, semi-fluid, or solid material

N. Keloids--Overgrowths of fibrous tissue at the site of a scar or traumatized area

O. Lipoma--Fatty tissue tumor, usually benign

P. Skin cancer--Abnormal malignant cells that appear on the skin

Examples: Basal cell epithelioma, squamous cell carcinoma, malignant melanoma

Q. Reconstructive surgery--Any type of operation that deals with repairing or reworking an area of the body for functional use or for cosmetic improvement

R. Skin grafting--Removing healthy skin from a donor or the patient and using it to restore tissue in a diseased or traumatized area

Examples: Autografts--from the same person; homografts--from a donor

S. Dermabrasion--Surgical planing of the skin to remove layers that have been destroyed or marred from various conditions

T. Viral infection--Condition caused by an invasion of a virus organism

INFORMATION SHEET

IX. Degrees of burns

A. First degree burns

(NOTE: First degree burns usually result from overexposure to the sun, light contact with hot objects, or contact with hot water or scalding steam.)

1. Redness or discoloration
2. Mild swelling and pain
3. Rapid healing

B. Second degree burns

(NOTE: Second degree burns result from contact with hot liquids or a deep sunburn.)

1. Pain greater than first degree
2. Damage extending into the first layer of tissue
3. Mottled or red areas
4. Blistering
5. Considerable swelling
6. Wet appearance of burned area due to loss of plasma

C. Third degree burns

(NOTE: These can be caused by flame, ignited clothing, contact with hot objects, immersion in hot water, or electricity.)

1. Deep tissue destruction
2. Less pain due to nervous tissue destruction
3. Charred or a white casted appearance

X. Treatment of first, second, and third degree burns

(NOTE: When assessing burns, it is necessary to look at the percentage of the body burned, the degree of burn, and the areas injured to determine treatment and how much of an emergency the condition merits.)

A. First degree--Apply cold water or submerge burned area in cold water; apply a dry dressing if necessary

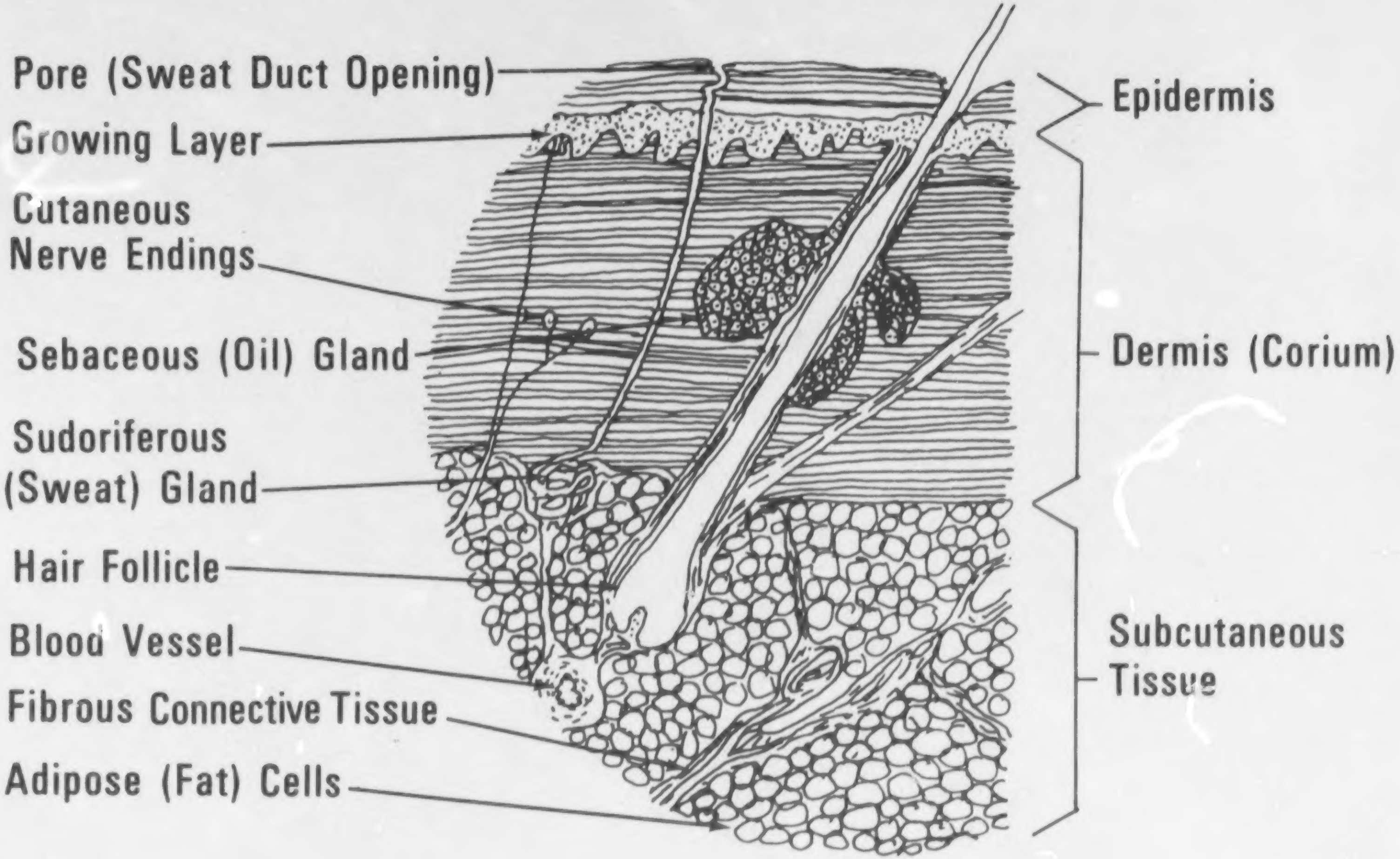
INFORMATION SHEET

B. Second degree--Submerge the part in cold, but not ice, water until pain subsides; blot dry gently and apply dry sterile dressings; do not break blisters and do not use any antiseptic ointments, sprays, or home remedies on burned area

C. Third degree--Cover burns with thick sterile dressings, but do not immerse in water; do not remove any tissue or burned clothing; transport victim to hospital as quickly as possible

(CAUTION: DO NOT give patients any fluids. Fluid balance and electrolytes will need to be checked as soon as patient arrives at hospital. This will make the check inaccurate and might overload patient.)

The Skin


Pore (Sweat Duct Opening)
Growing Layer
Cutaneous Nerve Endings
Sebaceous (Oil) Gland
Sudoriferous (Sweat) Gland
Hair Follicle
Blood Vessel
Fibrous Connective Tissue
Adipose (Fat) Cells
Epidermis
Dermis (Corium)
Subcutaneous Tissue

INTEGUMENTARY SYSTEM
UNIT IX

ASSIGNMENT SHEET #1--USE CASE STUDIES TO DEVELOP PATIENT QUESTIONING TECHNIQUES CONCERNING THE INTEGUMENTARY SYSTEM

NAME ______________________________ SCORE ____________________

Many times the medical assistant is called to the telephone to interpret patients' signs and symptoms. When questions are asked about skin conditions or emergency burns, the MA might be called upon to give first aid information or basic treatment steps to take before that patient comes in to the office or goes to the emergency room. Using the information gained in this unit and supplementary texts provided by the instructor, develop questions from the following case studies that you would ask patients about their condition.

Example: Mrs. John Rogers calls to tell you that John Jr. has awakened that morning with a rash on the lower trunk of his body. What is it? And what do I do?

Questions you might ask: What color is the rash? Does it itch? Is it a raised rash or a flattened rash? Is it hot to touch and does little Johnny have any elevated temperature? If so, how was temperature checked? Rectal, oral or axillary? Has he been exposed to any communicable diseases that she knows of?

CASE STUDY: Bob Evans, age 29, calls the office to tell you that he has just poured boiling water over his upper thigh when the kettle was knocked from the stove.

Questions: ____

____

____

____

____

____

____

____

____

____

____

ASSIGNMENT SHEET #1

CASE STUDY: Joan Holland calls to report her little girl has a funny looking little spot on her tummy. She is about eight years old and spent a couple of days with her cousins on the farm a couple of weeks ago. One of the cousins broke out with chickenpox three days ago.

Questions:

CASE STUDY: Mrs. Wheatland calls and tells you that her pressure cooker just "blew up" all over her hand and arm when she was canning some preserves. What should she do?

Questions:

ASSIGNMENT SHEET #1

CASE STUDY: Sam Early, 54, calls to tell you that he has some big blisters on his chest area and wants to know what to do for them.

Questions:

CASE STUDY: Mary Ann Holmes is frantic when she calls you to tell you that her 6 month old daughter has a big red place on her back and she has a temperature of 102 rectally. What should she do?

Questions:

INTEGUMENTARY SYSTEM
UNIT IX

JOB SHEET #1--APPLY A TOPICAL MEDICATION

(NOTE: Topical medications may be ointments that are rubbed into the skin or lotions swabbed on or massaged in well. Medications may be used with various types of dressings, or left uncovered.)

I. Equipment

A. Medication

(NOTE: Many medications have the instructions for use right on the tube or bottle, or listed on the package insert. Be sure to read this information if not familiar with the substance.)

B. Sterile or clean gloves if needed

(NOTE: Many medications are put on with the hand and fingers and will necessitate use of gloves. You may want to use gloves as a protection for yourself if area to be treated has bacteria contaminates.)

C. Dressings, if ordered

(NOTE: Make sure if a dressing is to be applied you have all the equipment needed to dress the area as soon as medication is applied. Some areas will not be dressed and left to dry or air out.)

D. Tongue depressors, or cotton swabs

II. Procedure

A. Make sure that you have the RIGHT medication to be used for that particular patient

(CAUTION: Check at least three times either verbally, or check with orders on chart that you are using the correct medicine.)

B. Collect all of the materials and equipment you will need in the area where you will be working

C. Wash hands

D. Identify patient by name and explain procedure

E. Provide privacy if area of the body is one that might embarrass that patient when exposed

F. Expose area to be treated

JOB SHEET #1

G. Apply medication as directed

(NOTE: Physician or package insert will instruct you in how much, method to use, and if any dressings will be needed for treatment.)

Example: Apply ointment (name) sparingly to infected area by cotton swab, smoothing medication until it is a fine film over all. Leave open to air

(CAUTION: Never rub medicine into open areas or breaks in skin if it is only to be used on surface.)

H. Apply dressing if ordered

I. Instruct patient if medication is to be used at home

J. Chart treatment completed

K. Check treated area before patient leaves to observe any reactions to medication

L. Wash hands

INTEGUMENTARY SYSTEM
UNIT IX

TEST

NAME____ SCORE__________________

1. Match terms associated with the integumentary system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Arranged in layers

_____b. Anything attached to a larger or major part

_____c. Covered with or consisting of scales

_____d. Secrete a waxy substance within the ear

_____e. Produce an oil secretion to keep the skin from becoming brittle or dry

_____f. Study of the skin

_____g. Outermost layer of skin that is formed into layers

_____h. Pigment granules that give the skin its color; found in the epidermis

_____i. Repair, regrowth, or restoration of a part

_____j. Pertaining to the skin

_____k. System pertaining to body covering; includes skin, hair, nails, and sweat glands

_____l. Layer just under the skin made up of elastic and fibrous tissue

_____m. Normal tension in cell

_____n. Cells that form outer layer of skin and surface layers of the mucous and serous membranes

1. Stratified
2. Melanin
3. Turgor
4. Squamous
5. Integumentary system
6. Epidermis
7. Sebaceous or oil glands
8. Dermatology
9. Cutaneous
10. Regeneration
11. Epithelium
12. Ceruminous glands
13. Subcutaneous tissue
14. Appendage

2. Distinguish between layers of the skin. Place an "E" for epidermis, a "D" for dermis, and an "S" for subcutaneous in the correct blanks.

_____a. Acts to attach the dermis to underlying structures

_____b. Covers entire body

_____c. Contains melanin

_____d. Framework consists of connective tissue

_____e. Stratified squamous epithelial cells

_____f. Lies directly below epidermis

_____g. Formed from elastic and fibrous tissues and deposits of fat

_____h. Aids in forming new cells

_____i. Contains blood vessels, nerves, lymph vessels, hair follicles, and sweat glands

3. Select from the following list appendages of the skin. Mark each correct answer with an "X."

_____a. Sweat glands

_____b. Sebaceous glands

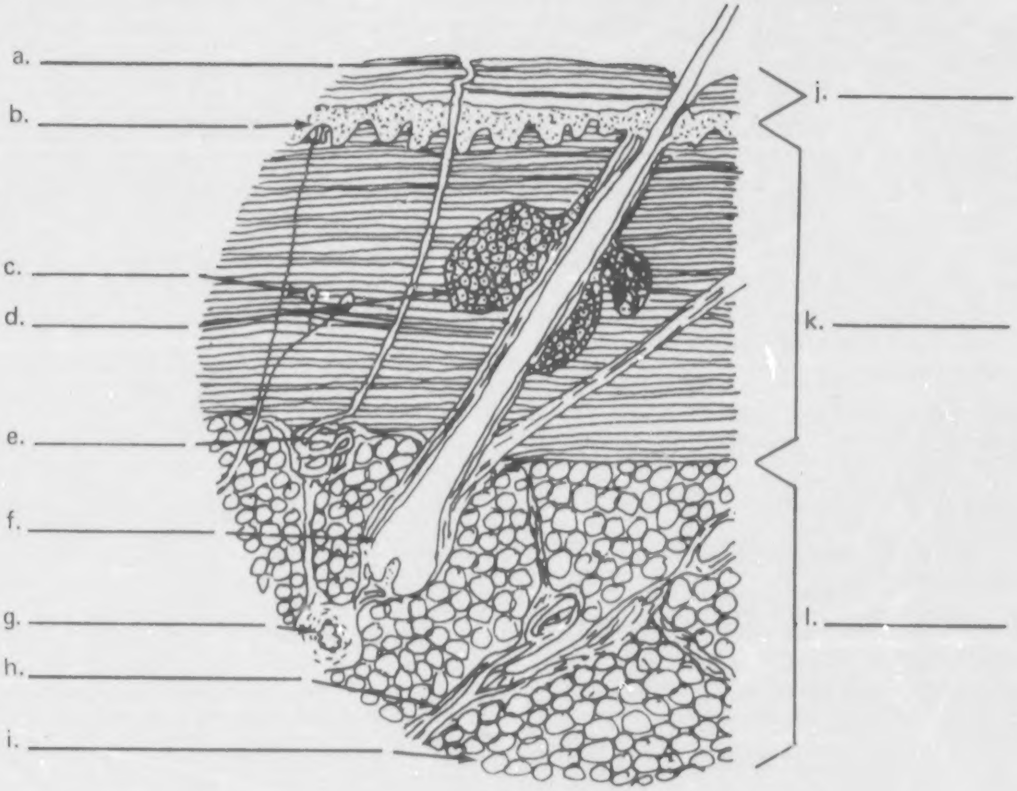
_____c. Nails

_____d. Nerves

_____e. Hair

_____f. Ceruminous glands in ears

4. Identify the parts of the skin. From the list below, write the correct numbers in the blanks provided.



1. Blood vessel
2. Epidermis
3. Adipose (fat) cells
4. Subcutaneous tissue
5. Pore (sweat duct opening)
6. Fibrous connective tissue
7. Dermis (Corium)
8. Cutaneous nerve ending
9. Hair follicle
10. Sebaceous (oil) glands
11. Growing layer
12. Sudoriferous (sweat) gland

5. Describe the functions of the integumentary system.

a. Sensation--

b. Protection--

c. Regulation of body temperature--

d.

e.

f.

6. State four principles for maintaining a healthy integumentary system.

a.

b.

c.

d.

7. List clinical characteristics of the skin that should be observed and reported.

a.

b.

c.

d.

e.

f.

8. Match common diseases, disorders, and procedures related to the integumentary system to the correct definitions. Place the correct numbers in the blanks provided.

_____ a. Small sacs or blisterlike eruptions that may contain different types of fluid

_____ b. Fatty tissue tumor, usually benign

_____ c. Abnormal malignant cells that appear on the skin

_____ d. Profuse itching that can be a symptom of many skin diseases without any visible skin lesions

_____ e. Overgrowths of fibrous tissue at the site of a scar or traumatized area

_____ f. Acute contagious disease of staphylococcal or streptococcal infection that forms blisterlike lesions filled with pus

_____ g. Inflammation of subcutaneous layer of tissue, gland, or hair follicle caused by a local staphylococcal invasion

_____ h. Any type of operation that deals with repairing or reworking an area of the body for functional use or for cosmetic improvement

_____ i. Skin eruptions made from tiny fungi that affect the skin and other appendages

_____ j. Rash in which spots are neither raised nor depressed

_____ k. Lesions that appear elevated; usually filled with lymph or pus

_____ l. Elevation of skin that usually appears round or in a ridge that is white in center with pale red circling the area

_____ m. Closed sacs or pouches that contain fluid, semi-fluid, or solid material

_____ n. Eruption of dry, scaly, silvery patches, usually on arms, legs, scalp, ears, and over the sacrum

_____ o. Loss of surface tissue due to death of cells, caused by various conditions

1. Vesicles
2. Skin cancer
3. Lipoma
4. Pustule
5. Macules
6. Cysts
7. Reconstructive surgery
8. Wheal
9. Ulceration
10. Psoriasis
11. Fungal infections
12. Keloids
13. Prutitis
14. Impetigo
15. Boils

______p. Rash with firm raised areas; frequently occurs before the pustular stage and may be red in color

______q. Disorder causing watery blisters to form along certain nerve paths; part of the herpes group

______r. Surgical planing of the skin to remove layers that have been destroyed or marred from various conditions

______s. Removing healthy skin from a donor or the patient and using it to restore tissue in a diseased or traumatized area

______t. Condition caused by an invasion of a virus organism

16. Papules
17. Shingles
18. Dermabrasion
19. Skin grafting
20. Viral infection

9. Distinguish between degrees of burns. Place a "1" for first degree, "2" for second degree and "3" for third degree burns in the blanks provided.

______a. Rapid healing

______b. Blistering

______c. Redness or discoloration

______d. Deep tissue destruction

______e. Charred or a white casted appearance

______f. Considerable swelling

______g. Mild swelling and pain

______h. Damage extending into the first layer of tissue

______i. Wet appearance of burned area due to loss of plasma

______j. Mottled or red areas

______k. Less pain due to nervous tissue destruction

______l. Pain greater than first degree

10. Match first, second, and third degree burns to their correct treatments. Place the correct number in the blanks provided.

_____a. Cover burns with thick sterile dressings, but do not immerse in water; do not remove any tissue or burned clothing; transport victim to hospital as quickly as possible

_____b. Apply cold water or submerge burned area in cold water; apply a dry dressing if necessary

_____c. Submerge the part in cold, but not ice, water until pain subsides; blot dry gently and apply dry sterile dressings; do not break blisters and do not use any antiseptic ointments, sprays, or home remedies on burned area

1. First degree
2. Second degree
3. Third degree

11. Use case studies to develop patient questioning techniques concerning the integumentary system.

12. Demonstrate the ability to apply a topical medication.

(NOTE: If activities 11 and 12 have not been finished before the test, ask your instructor when they should be completed.)

INTEGUMENTARY SYSTEM
UNIT IX

ANSWERS TO TEST

1. a. 1
   b. 14
   c. 4
   d. 12
   e. 7
   f. 8
   g. 6
   h. 2
   i. 10
   j. 9
   k. 5
   l. 13
   m. 3
   n. 11

2. a. S
   b. E
   c. E
   d. D
   e. E
   f. D
   g. S
   h. E
   i. D

3. a, b, c, e, f

4. a. 5
   b. 11
   c. 8
   d. 10
   e. 12
   f. 9
   g. 1
   h. 6
   i. 3
   j. 2
   k. 7
   l. 4

5. Descriptions should include:
   a. 1) Basic sensations
         a) Pain
         b) Temperature
         c) Touch
         d) Pressure
      2) Permits body to adjust to changes in weather

b. 1) Forms an elastic covering for protection against external environment
   2) Prevents excessive loss of fluids and electrolytes
   3) Assists in preventing microorganisms from invading body
   4) Repels water

c. 1) Evaporation of perspiration cools skin
   2) Adjustment in size of blood vessels increases or decreases heat loss
   3) Fatty tissues act as insulation to prevent heat loss

d. Excretion of water, salt, and waste products

e. Formation of vitamin D when exposed to sun or ultraviolet light

f. Secretion of oil to maintain elasticity and water resistance

6. Any four of the following:

   a. Keep body clean
   b. Drink six to eight glasses of water daily
   c. Obtain enough sleep at night
   d. Adjust diet to include recommended amounts of four basic food groups with special emphasis on foods containing vitamins A, C, and D
   e. Expose body to fresh air and sunshine regularly
   f. Engage in exercise and physical activity regularly
   g. Promote regular elimination habits
   h. Take care of any cuts, abrasions, rashes, or other breaks in the skin promptly

7. a. Color of skin
   b. Skin injuries
   c. Skin eruptions
   d. Skin texture
   e. Skin temperature
   f. Skin turgor

8.	a.	1	f.	14	k.	4	p.	16
	b.	3	g.	15	l.	8	q.	17
	c.	2	h.	7	m.	6	r.	18
	d.	13	i.	11	n.	10	s.	19
	e.	12	j.	5	o.	9	t.	20
9.	a.	1	h.	2				
	b.	2	i.	2				
	c.	1	j.	2				
	d.	3	k.	3				
	e.	3	l.	2				
	f.	2						
	g.	1						
10.	a.	3						
	b.	1						
	c.	2						

11. Evaluated to satisfaction of instructor

12. Performance skills evaluated to satisfaction of instructor

NERVOUS SYSTEM
UNIT X

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the nervous system to assist in treatment and education of patients with nervous system problems. This knowledge will be evidenced through completion of the job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the nervous system to the correct definitions.
2. Name functions of the nervous system.
3. Distinguish between components of parts of the nervous system.
4. Identify main sections of the central nervous system.
5. Match areas of the cerebral cortex to their correct functions.
6. Match parts of the brain to the correct functions.
7. State functions of the spinal cord.
8. Describe the protection of the central nervous system.
9. State ways to maintain the nervous system.
10. Match common diseases, disorders and procedures associated with the nervous system to the correct definitions.
11. Demonstrate the ability to:
    a. Test reflexes.
    b. Test cranial nerves.

NERVOUS SYSTEM
UNIT X

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and job sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information sheet.

   F. Invite neurologist to speak on that specialty, including diagnostic tests, disorders, and treatment.

   G. Obtain organs from animal meat market to demonstrate anatomy and physiology.

   Examples: Brain

   H. Invite a psychiatrist or psychologist to speak on their special field.

   I. Demonstrate and dicuss procedure outlined in job sheets.

   J. Provide equipment and allow time for return demonstration of job sheets.

   K. Give test

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--Nerve Cell

      2. TM 2--Human Nervous System

      3. TM 3--The Cranial Nerves

      4. TM 4--Sections of the Central Nervous System

      5. TM 5--Functional Areas of the Brain

D. Job sheets

   1. Job Sheet #1--Test Reflexes

   2. Job Sheet #2--Test Cranial Nerves

E. Test

F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York. McGraw-Hill Book Company, 1978.

C. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

D. Thomas, Clayton L., M.D., ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

IV. Additional materials:

A. Film--*Human Body: The Nervous System.* Available from Oklahoma State Department of Health, N.E. 10th and Stonewall, Oklahoma City, Oklahoma 73104

B. Filmstrip–*The Nervous System.* Robert J. Brady Company.

NERVOUS SYSTEM
UNIT X

INFORMATION SHEET

I. Terms and definitions

A. Affector--Group of cells functioning in reception of stimuli; receiving end of sensory nerves

(NOTE: These are receptor nerves.)

B. Cerebral cortex--Outer layer of the cerebrum

C. Cerebrospinal fluid--Watery fluid found in the ventricles of the cerebrum and surrounding the spinal cord

D. Effector--Nerve endings that carry out actions

(NOTE: These are motor nerves.)

E. Ganglion--Mass of nerve tissue, principally nerve cell bodies, outside the central nervous system

F. Nerve--Bundle of nerve fibers, blood vessels, and connective tissue outside the central nervous system

G. Neurology--Study of the nervous system

H. Neuron--Basic nerve cell

I. Psyhchiatrist--Physician who specializes in the study and treatment of mental illness

J. Psychology--Study of mental processes, "normal" and "abnormal," and their effects on behavior

K. Regeneration--Repair, regrowth, or restoration of a part

L. Stimulus--Any agent or influence that produces a response or increase in activity in living protoplasm

M. Ventricle--Small brain cavity

II. Functions of the nervous system

A. Reception of external impressions and information

(NOTE: These are external stimuli.)

B. Coordination of internal messages

(NOTE: These are internal stimuli.)

INFORMATION SHEET

C. Response and readjustment to internal and external stimuli

D. Storage of information

(NOTE: This is memory.)

E. Coordination of all body activities

III. Components of parts of the nervous system (Transparencies 1, 2, and 3)

A. Central nervous system

1. Brain

2. Spinal cord

B. Peripheral nervous system

(NOTE: These nerves extend to outlying parts of the body.)

1. Cranial nerves

(NOTE: There are twelve pairs.)

2. Spinal nerves

(NOTE: There are thirty-one pairs.)

C. Autonomic nervous system--Involuntary nervous system

(NOTE: This part of the system regulates the action of the glands, the smooth muscles of the hollow organs, and the heart automatically without one being consciously aware of them much of the time. There are two divisions of the autonomic nervous system. The sympathetic system accelerates some body processes and the parasympathetic helps to balance action of sympathetic system.)

IV. Main sections of the central nervous system (Transparency 4)

A. Brain

1. Forebrain

a. Cerebrum

b. Thalamus

c. Hypothalamus

2. Midbrain

INFORMATION SHEET

3. Hindbrain
    a. Pons
    b. Medulla oblongata
    c. Cerebellum

B. Spinal cord

V. Functions of areas of the cerebral cortex (Transparency 5)

A. Motor area--Controls movement of muscles

B. Sensory area--Receives impulses of heat, cold, touch, pain, and pressure from receptors

C. Association area--Controls higher mental functions

Examples: Learning, memory, reasoning, judgment, conscience, thinking, insight, and emotions

VI. Functions of the brain (Transparency 5; Job Sheets #1 and #2)

(NOTE: The left side of the brain controls the right side of the body, and the right side of the brain controls the left side of the body. The top of the brain controls lower portion of body; bottom controls the top of body.)

A. Frontal lobe of cerebrum--Controls voluntary muscles and judgment

B. Parietal lobe of cerebrum--Controls sensory functions, such as pain, touch, and temperature interpretation

C. Temporal lobe of cerebrum--Controls hearing, smell, and taste

D. Occipital lobe of cerebrum--Controls vision

E. Thalamus--Serves as relay center; monitors sensory stimuli

F. Hypothalamus--Controls body temperature, water balance, sleep, appetite, some emotions such as fear and pleasure, and both divisions of the autonomic nervous system

G. Midbrain--Serves as a reflex center

H. Pons--Connects the cerebrum and cerebellum

(NOTE: This is the site of fifth, sixth, seventh, and eighth cranial nerves.)

INFORMATION SHEET

- I. Medulla--Controls vital functions, such as breathing, heart rate, blood pressure, swallowing, and coughing
- J. Cerebellum--Maintains balance, equilibrium, coordination, and muscle tone

VII. Functions of the spinal cord

- A. Conducts impulses to and from the brain
- B. Serves as a reflex center to receive and transmit messages through nerve fibers

VIII. Protection of the central nervous system

- A. Fragile nervous tissue--Is protected by fluid, membrane, and bones
- B. Brain--Is covered by cranial bones
- C. Spinal cord--Is surrounded by vertebrae
- D. Cranial bones and vertebrae--Are lined with meninges, a tough membrane

IX. Ways to maintain the nervous system

- A. Adequate diet with particular attention to vitamins A, B, C, riboflavin, niacin, pyridoxine, proteins, and carbohydrates essential for energy
- B. Avoidance of excessive use of substances which may adversely affect the nervous system

  Examples: Alcohol, carbon monoxide, barbiturates, caffeine, and nicotine

- C. Prompt care of infections and injuries to minimize loss of nerve function
- D. Extra care to prevent further tissue damage in cases of nerve damage with loss of function or sensation
- E. Genetic counseling for parents who are carriers of inherited disorders of the nervous system
- F. Testing of newborn infants for phenylketonuria

  (NOTE: Phenylketonuria, PKU, is an inherited metabolic disorder which can produce mental retardation unless detected and treated in infants.)

- G. Treatment of inherited or congenital defects to the fullest extent possible

INFORMATION SHEET

H. Adequate sleep to provide rest for the nervous system

I. Injections of medicines given in area where there is minimum chance of contact with nerves

J. Periods of relaxation

K. Periods of productive activity

L. Practice of good mental hygiene

M. Use of drugs only by physician's orders

X. Common diseases, disorders, and procedures associated with nervous system

A. Encephalitis--Infection of the brain

(NOTE: There are many causes for this infection but two primary causes are viruses and certain protozoa bacteria.)

B. Stroke--Rupture of a blood vessel or blood clot that can cause damage to brain tissue

(NOTE: This condition is also known as CVA and is related to cerebral hemorrhage and cerebral vascular accident.)

C. Cerebral palsy (CP)--Disorder causing muscular weakness that progresses to total paralysis

D. Epilepsy--Chronic disorder caused by abnormal brain wave function that causes victim to have seizures; may experience convulsions and become unconscious

(NOTE: Different types of seizures may be experienced and for most patients the disorder can be controlled with medication.)

E. Multiple sclerosis (MS)--Chronic progressive disease that causes degeneration of nerve tissue, causing muscles to atrophy and patient to lose muscle control

F. Meningitis--Inflammation of the brain coverings

(NOTE: This condition is caused by bacteria that attack the spinal cord area, or the spinal cord and brain.)

G. Neuritis--Inflammation of a nerve due to trauma, degeneration, or infection

H. Lumbar spinal puncture--Test done by inserting a needle into spinal fluid and drawing out a specimen for study

I. Parkinson's disease--Common disorder causing a fine, slowly spreading tremor, a type of abnormal walk and muscular weakness

INFORMATION SHEET

J. Electroencephalogram (EEG)--Test used to record and measure electrical activity of the brain

(NOTE: The test is done by attaching electrodes to the scalp. The most important function of the medical assistant at this time is to reassure the patient that it is a safe test and that he/she should relax to make sure the test is accurate.)

K. Paraplegia--Paralysis of lower trunk and extremities

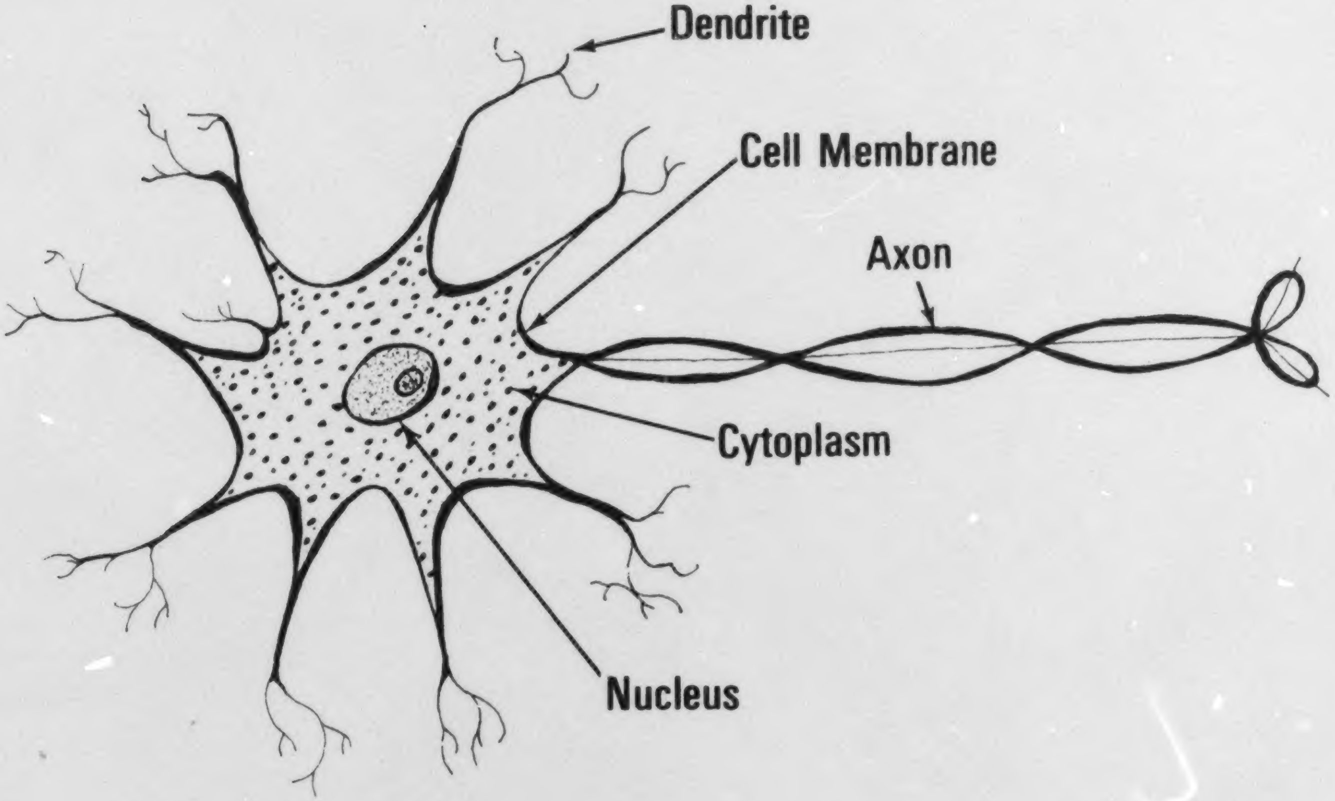
L. Paralysis--Temporary or permanent loss of function, sensation and voluntary movement

M. Quadriplegia--Paralysis involving both upper and lower extremities

N. Hemiplegia--Paralysis of only one half of the body

O. Tic douloureux--Degeneration of or pressure on the trigeminal nerve causing extremely painful spasms

Nerve Cell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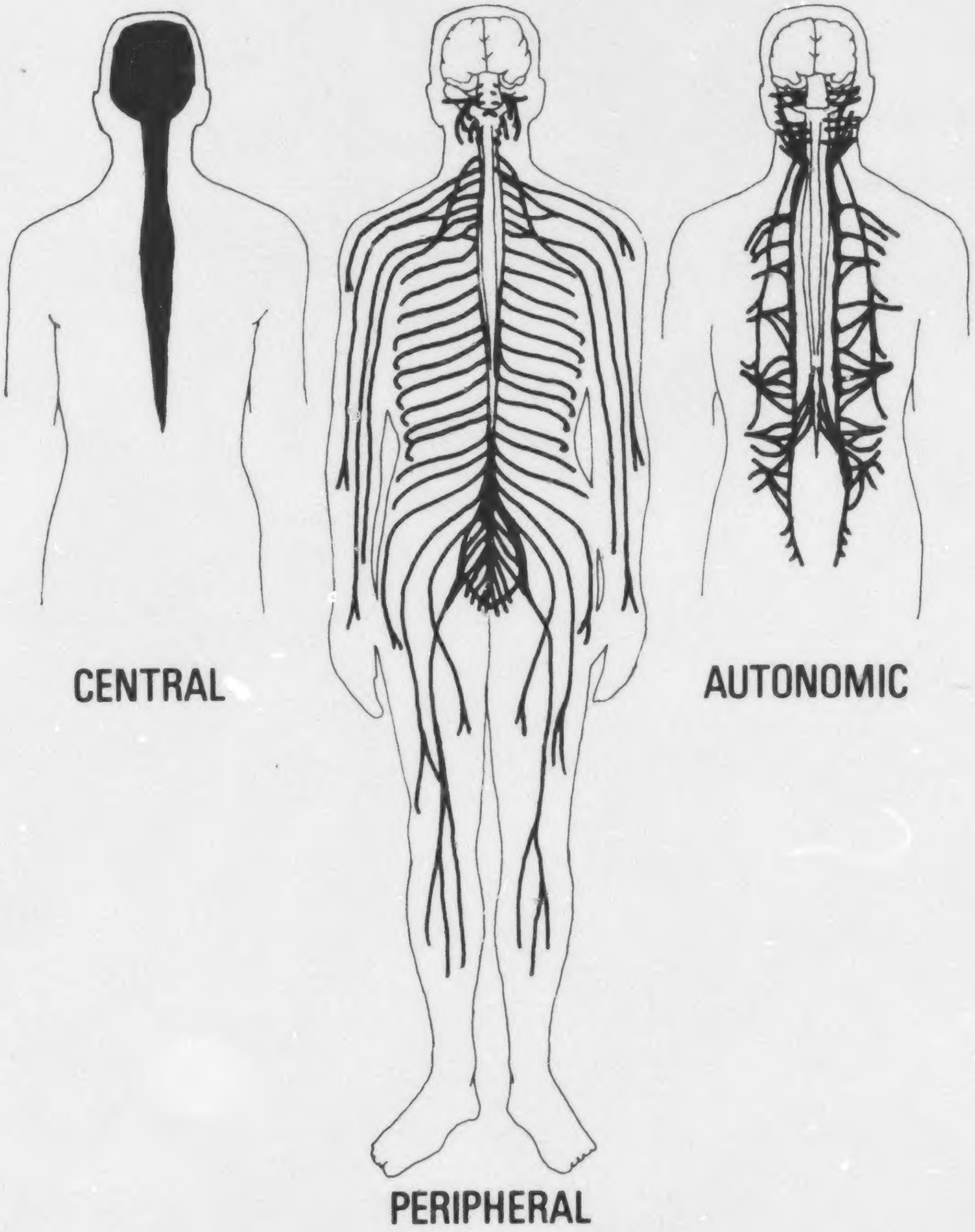
Cell Membrane
Axon
Cytoplasm
Nucleus

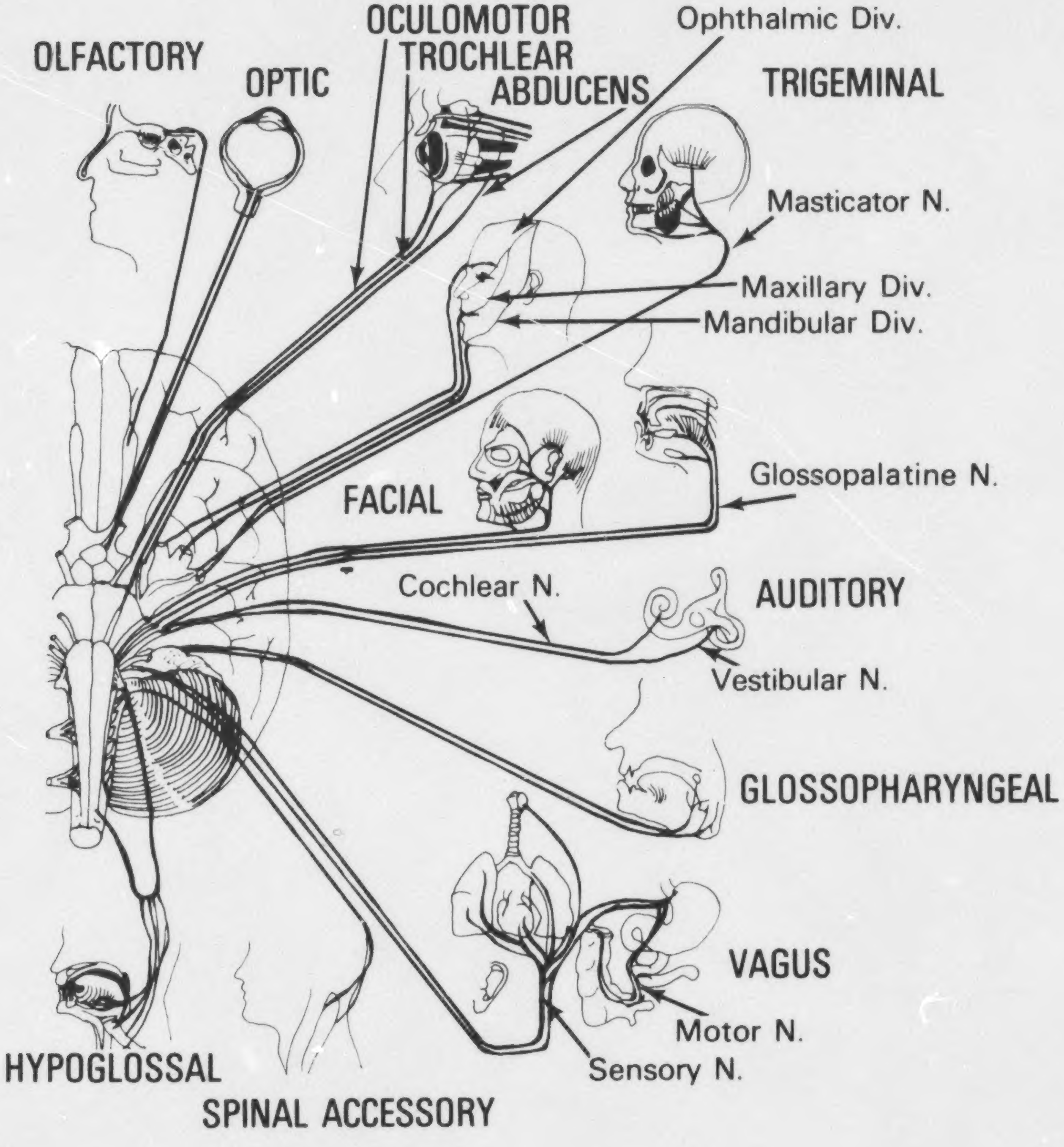
TM 1

MA - 413-B

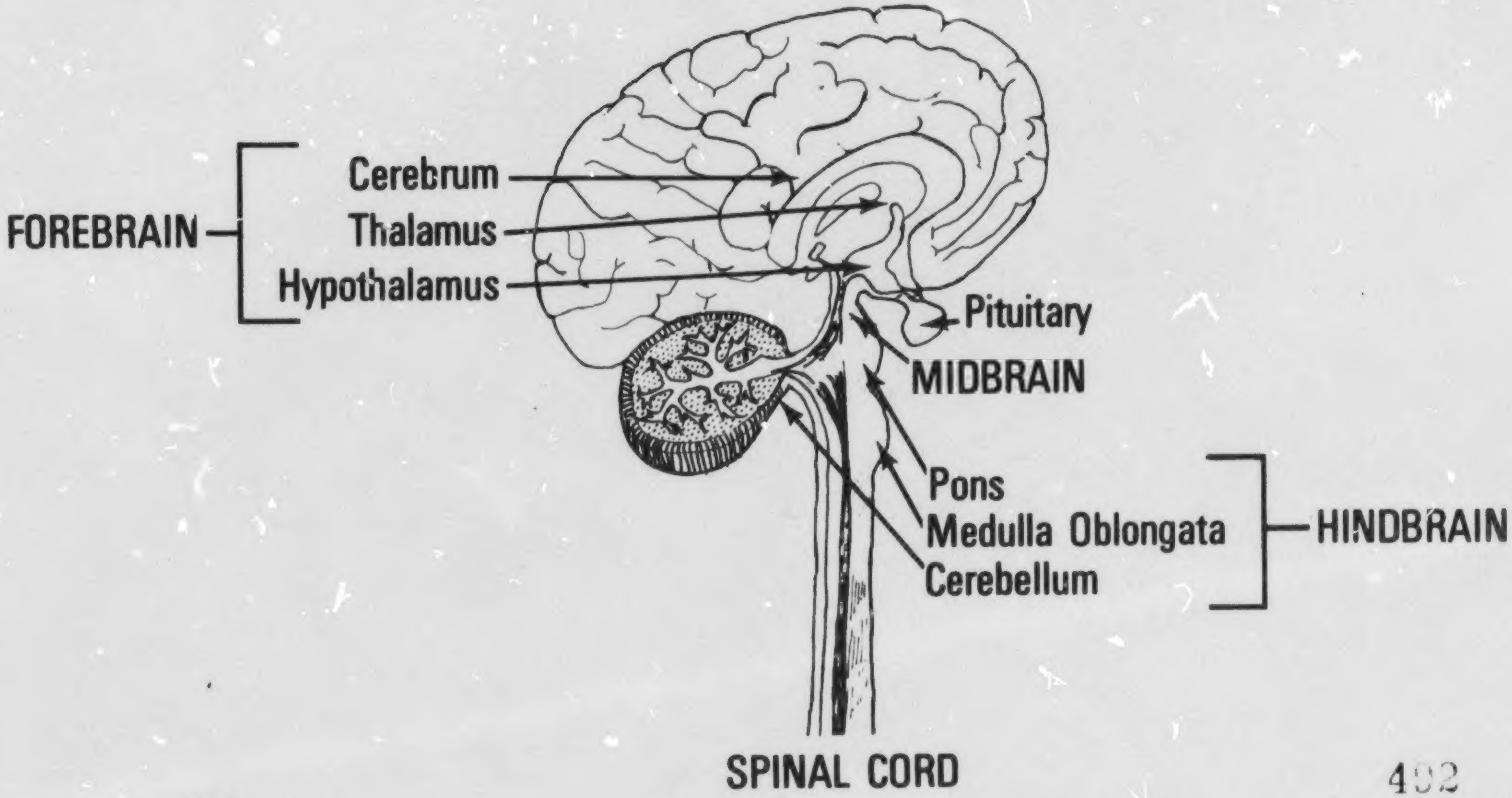
Human Nervous System


CENTRAL
AUTONOMIC
PERIPHERAL

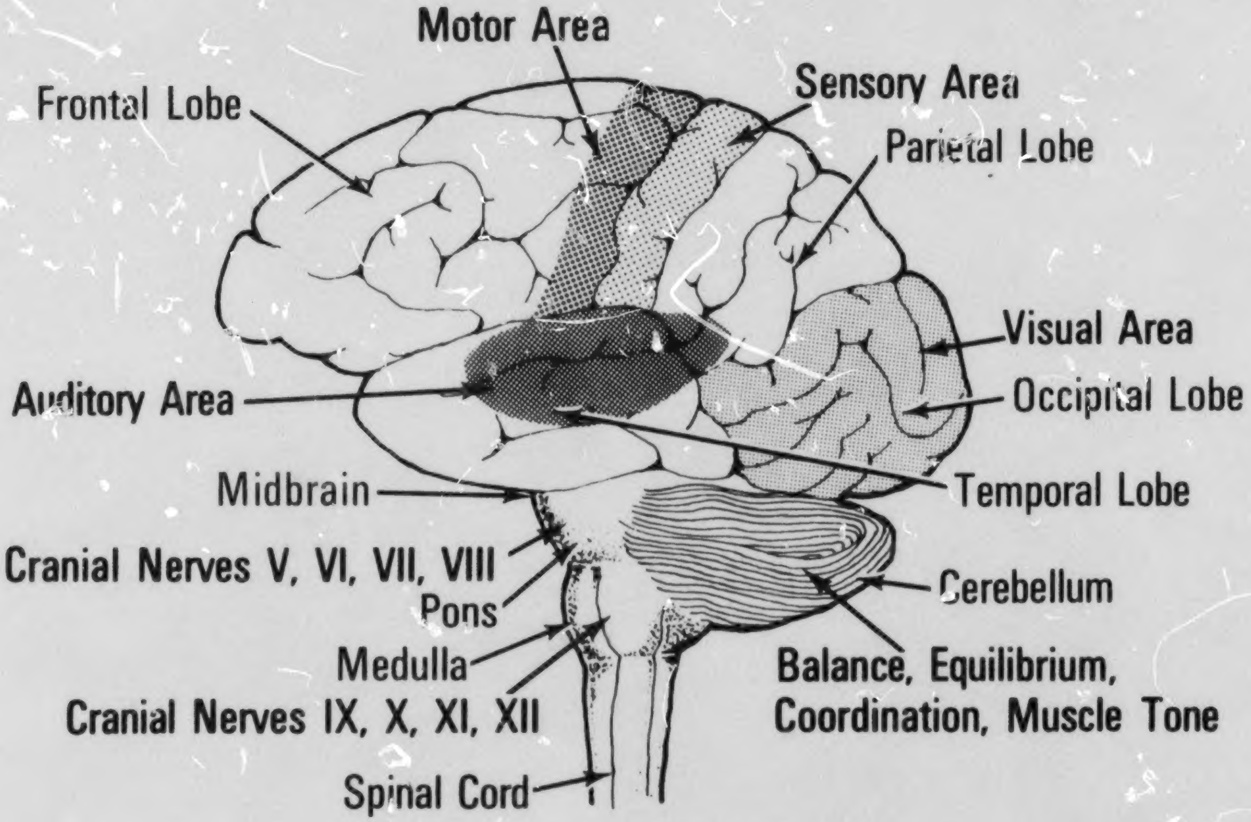
The Cranial Nerves


OCULOMOTOR
Ophthalmic Div.
OLFACTORY
TROCHLEAR
OPTIC
ABDUCENS
TRIGEMINAL
Masticator N.
Maxillary Div.
Mandibular Div.
Glossopalatine N.
FACIAL
Cochlear N.
AUDITORY
Vestibular N.
GLOSSOPHARYNGEAL
VAGUS
Motor N.
Sensory N.
HYPOGLOSSAL
SPINAL ACCESSORY

Sections of the Central Nervous System


FOREBRAIN
Cerebrum
Thalamus
Hypothalamus
Pituitary
MIDBRAIN
Pons
Medulla Oblongata
Cerebellum
HINDBRAIN
SPINAL CORD

Functional Areas of the Brain


Motor Area
Frontal Lobe
Sensory Area
Parietal Lobe
Visual Area
Auditory Area
Occipital Lobe
Midbrain
Temporal Lobe
Cranial Nerves V, VI, VII, VIII
Pons
Cerebellum
Medulla
Balance, Equilibrium, Coordination, Muscle Tone
Cranial Nerves IX, X, XI, XII
Spinal Cord

NERVOUS SYSTEM
UNIT X

JOB SHEET #1--TEST REFLEXES

I. Equipment needed--Percussion hammer

II. Procedure

A. Plantar reflex--Stroke the outer side of the sole of the foot with a blunt instrument from heel to toe

(NOTE: The normal reaction should be the flexion of the great toe. The abnormal reaction would be extension of the great toe with a fanning spread of other toes. This extensor reflex is called the Babinski reflex.)

B. Ankle jerk--Tap the Achilles tendon with the flat side of the percussion hammer

(NOTE: The normal reaction should be extension followed by flexion of the ankle. The abnormal reaction would be absent or exaggerated action.)

C. Knee jerk or patellar reflex--Tap knee just above or below patella

(NOTE: The normal reaction should be extension of the lower leg. The abnormal reaction would be absent or exaggerated action.)

NERVOUS SYSTEM
UNIT X

JOB SHEET #2--TEST CRANIAL NERVES

I. Equipment and materials needed

A. Substance for testing sense of smell

B. Snellen eye chart or printed page with varying sizes of letters

C. Pin or other sharp instrument

D. Warm and cold objects, such as a small metal object that can be warmed or cooled

E. Items to taste--Salt, sugar, and something bitter such as quinine

II. Procedure for testing specific nerves

A. Olfactory nerve--Test for smell by closing each side of the nose with finger while testing the other side

B. Optic nerve--Test using eye chart or by reading a printed page of varying size of printed letters

C. Oculomotor nerve--Test by raising upper eyelid and by having person turn eyes from side to side without turning head

(NOTE: Damage to third nerve also may cause blurred or double vision.)

D. Trochlear nerve--Test by having eyes turn up and then turn side to side without moving head

E. Trigeminal nerve

1. Test motor function by asking the person to clench teeth

2. Test sensory function by checking face for reaction to pain and temperature

(NOTE: Injury to one part of the fifth nerve may cause loss of sensation in the cornea and conjunctiva which can be tested only with special equipment.)

F. Abducens nerve--Have person turn eyes from side to side without moving head

(NOTE: There are six muscles which control eye movements. They perform as prime mover and antagonist; that is, when one contracts, its opposite relaxes.)

JOB SHEET #2

G. Facial nerve

1. Test motor function by having person wrinkle forehead, frown, whistle, and close eyelids tightly
2. Test sensory function by having patient taste sugar, salt, and quinine or some other bitter substance

H. Auditory nerve

1. Test hearing function by observing the person's ability to hear a whispered voice
   a. Have person stand fifteen feet from examiner
   b. Have person cover ear closest to examiner with hand to see if examiner's whisper can be heard with the uncovered ear
2. Test equilibrium or balance function by using the past-pointing test
   a. Ask the person to raise arms straight out to the side
   b. Have person touch index fingers together, first with eyes open and then with eyes closed

   (NOTE: Normally, the person should be able to touch the fingers together as well with eyes closed as open.)

I. Glossopharyngeal nerve

1. Test taste on posterior one-third of tongue
2. Test ability to swallow

J. Accessory nerve

1. Test trapezius muscle by having person raise shoulders against resistance by pressure from the examiner's hands
2. Test sternocleidomastoid muscle by having person turn head to right and/to left against resistance of examiner's hands

K. Hypoglossal nerve--Test by having person protrude tongue

(NOTE: Normally, tongue will protrude in the midline.)

NERVOUS SYSTEM
UNIT X

TEST

NAME ______________________________ SCORE ____________

1. Match terms associated with the nervous system to the correct definitions. Place the correct numbers in the blanks provided.

_____ a. Nerve endings that carry out actions

_____ b. Basic nerve cell

_____ c. Any agent or influence that produces a response or increase in activity in living protoplasm

_____ d. Mass of nerve tissue principally nerve cell bodies, outside the central nervous system

_____ e. Small brain cavity

_____ f. Outer layer of the cerebrum

_____ g. Bundle of nerve fibers, blood vessels, and connective tissue outside the central nervous system

_____ h. Repair, regrowth, or restoration of a part

_____ i. Study of the nervous system

_____ j. Group of cells functioning in reception of stimuli; receiving end of sensory nerves

_____ k. Watery fluid found in the ventricles of the cerebrum and surrounding the spinal cord

_____ l. Study of mental processes, "normal" and "abnormal," and their effects on behavior

_____ m. Physician who specializes in the study and treatment of mental illness

1. Affector
2. Neurology
3 Stimulus
4. Effector
5. Cerebral cortex
6. Nerve
7. Ventricle
8. Regeneration
9. Cerebrospinal fluid
10. Ganglion
11. Neuron
12 . Psychiatrist
13. Psychology

2. Name functions of the nervous system.

a. ____

b. ____

c. ____

d. ______________________________

e. ______________________________

3. Distinguish between components of parts of the nervous system. Place a "C" for central nervous system, a "P" for peripheral nervous system, and an "A" for autonomic nervous system in the correct blanks.

_____a. Cranial nerves

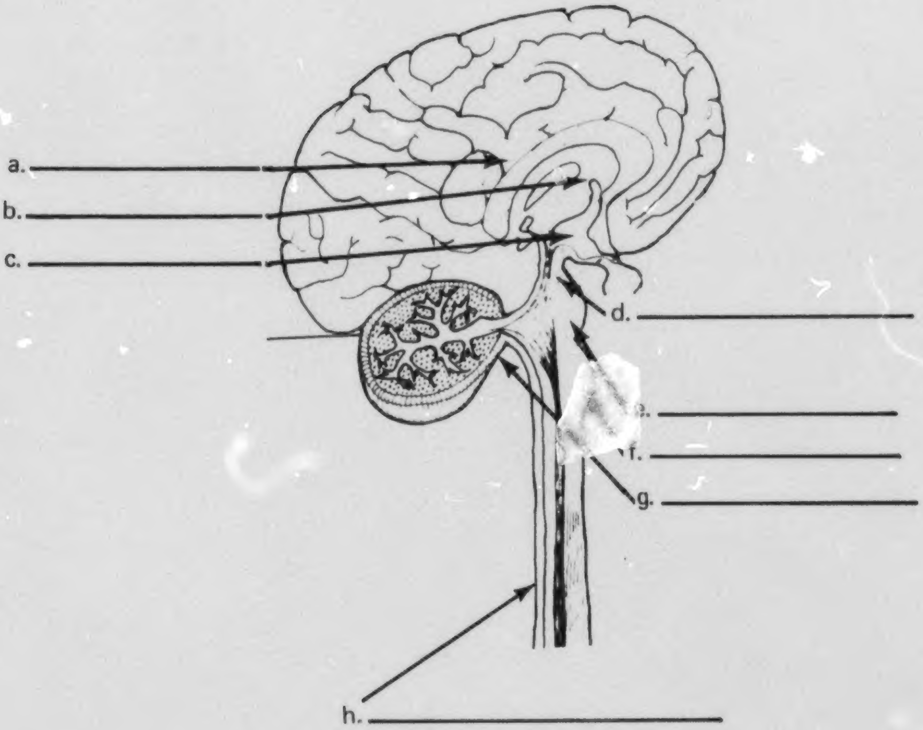
_____b. Spinal cord

_____c. Involuntary nervous system

_____d. Brain

_____e. Spinal nerves

4. Identify main sections of the central nervous system. Write the correct names in the blanks provided.



Midbrain

Medulla Oblongata

Cerebrum

Hypothalamus

Cerebellum

Spinal cord

Pons

Thalamus

5. Match areas of the cerebral cortex to the correct functions. Place the correct numbers in the blanks provided.

______a. Controls higher mental functions

______b. Receives impulses of heat, cold, touch, pain, and pressure from receptors

______c. Controls movement of muscles

1. Motor area
2. Sensory area
3. Association area

6. Match parts of the brain to their correct functions. Place the correct numbers in the blanks provided.

______a. Serves as a reflex center

______b. Controls vision

______c. Maintains balance, equilibrium, coordination, and muscle tone

______d. Controls voluntary muscles and judgment

______e. Controls hearing, smell, and taste

______f. Controls sensory functions, such as pain, touch, and temperature interpretation

______g. Serves as relay center; monitors sensory stimuli

______h. Controls body temperature, water balance, sleep, appetite, some emotions such as fear and pleasure, and both divisions of the autonomic nervous system

______i. Connects the cerebrum and cerebellum

______j. Controls vital functions, such as breathing, heart rate, blood pressure, swallowing, and coughing

1. Cerebellum
2. Pons
3. Hypothalamus
4. Occipital lobe of cerebrum
5. Parietal lobe of cerebrum
6. Medulla
7. Midbrain
8. Thalamus
9. Temporal lobe of cerebrum
10. Frontal lobe of cerebrum

7. State the functions of the spinal cord.

a. ____

b. ____

8. Describe the protection of the central nervous system.

____

____

____

____

9. State six ways to maintain the nervous system.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

e. ____________________

f. ____________________

10. Match common diseases, disorders, and procedures associated with the nervous system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Disorder causing muscular weakness that progresses to total paralysis

_____b. Inflammation of the brain coverings

_____c. Infection of the brain

_____d. Chronic disorder caused by abnormal brain wave function that causes victim to have seizures; may experience convulsions and become unconscious

_____e. Chronic progressive disease that causes degeneration of nerve tissue, causing muscles to atrophy and patient to lose muscle control

_____f. Rupture of a blood vessel or blood clot that can cause damage to brain tissue

_____g. Common disorder causing a fine, slowly spreading tremor, a type of abnormal walk and muscular weakness

_____h. Paralysis of only one side of the body

_____i. Degeneration of or pressure on the trigeminal nerve causing extremely painful spasms

_____j. Inflammation of a nerve due to trauma, degeneration, or infection

_____k. Test used to record and measure electrical activity of the brain

_____l. Paralysis of lower trunk and extremities

1. Encephalitis
2. Stroke
3. Cerebral palsy
4. Epilepsy
5. Multiple sclerosis
6. Meningitis
7. Tic douloureux
8. Paralysis
9. Neuritis
10. Electroencephalogram (EEG)
11. Paraplegia
12. Parkinson's disease
13. Quadriplegia
14. Hemiplegia
15. Lumbar spinal puncture

_____m. Test done by inserting a needle into spinal fluid and drawing out a specimen for study

_____n. Paralysis involving both upper and lower extremities

_____o. Temporary or permanent loss of function, sensation and voluntary movement

11. Demonstrate the ability to:

    a. Test reflexes.

    b. Test cranial nerves.

    (NOTE: If these activities have not been finished before the test, ask your instructor when they should be completed.)

NERVOUS SYSTEM
UNIT X

ANSWERS TO TEST

1.	a.	4	h.	8
	b.	11	i.	2
	c.	3	j.	1
	d.	10	k.	9
	e.	7	l.	13
	f.	5	m.	12
	g.	6		

2. a. Reception of external impressions and information

   b. Coordination of internal messages

   c. Response and readjustment to internal and external stimuli

   d. Storage of information

   e. Coordination of all body activities

3.	a.	P
	b.	C
	c.	A
	d.	C
	e.	P

4.	a.	Cerebrum	e.	Pons
	b.	Thalamus	f.	Medulla oblongata
	c.	Hypothalamus	g.	Cerebellum
	d.	Midbrain	h.	Spinal cord

5.	a.	3
	b.	2
	c.	1

6. a. 7 f. 5
   b. 4 g. 8
   c. 1 h. 3
   d. 10 i. 2
   e. 9 j. 6

7. a. Conducts impulses to and from the brain
   b. Serves as a reflex center to receive and transmit messages through nerve fibers

8. Description should include:
   a. Fragile nervous tissue--Is protected by fluid, membrane, and bones
   b. Brain--Is covered by cranial bones
   c. Spinal cord--Is surrounded by vertebrae
   d. Cranial bones and vertebrae--Are lined with meninges, a tough membrane

9. Any six of the following:
   a. Adequate diet with particular attention to vitamins A, B, C, riboflavin, niacin, pyridoxine, proteins, and carbohydrates essential for energy
   b. Avoidance of excessive use of substances which may adversely affect the nervous system
   c. Prompt care of infections and injuries to minimize loss of nerve function
   d. Extra care to prevent further tissue damage in cases of nerve damage with loss of function or sensation
   e. Genetic counseling for parents who are carriers of inherited disorders of the nervous system
   f. Testing of newborn infants for phenylketonuria
   g. Treatment of inherited or congenital defects to the fullest extent possible
   h. Adequate sleep to provide rest for the nervous system
   i. Injections of medicines given in areas where there is a minimum chance of contact with nerves
   j. Periods of relaxation
   k. Periods of productive activity
   l. Practice of good mental hygiene
   m. Use of drugs only by physician's orders

10. a. 3
    b. 6
    c. 1
    d. 4
    e. 5
    f. 2
    g. 12
    h. 14
    i. 7
    j. 9
    k. 10
    l. 11
    m. 15
    n. 13
    o. 8

11. Performance skills evaluated to the satisfaction of the instructor

SPECIAL SENSES
UNIT XI

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the special senses in identifying related equipment, assisting physician in diagnostic procedures, and patient education. The student should also be able to measure vision, prepare the ophthalmoscope and otoscope for use and do special procedures related to the organs of the special senses. This knowledge will be evidenced through completion of the assignment sheet, job sheets, and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the special senses to the correct definitions.
2. Name the basic senses.
3. Match eye and accessory structures to the correct functions.
4. Identify structures of the ear.
5. Match common diseases, disorders, and procedures associated with special senses to the correct definitions.
6. Discuss the sense of taste.
7. Discuss the sense of smell.
8. Describe reaction of taste buds.
9. Demonstrate the ability to:
    a. Measure vision.
    b. Prepare ophthalmoscope and otoscope for use.
    c. Irrigate ear.
    d. Administer eye, ear, and nose medications.

SPECIAL SENSES
UNIT XI

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information, assignment, and job sheets.

  C. Make transparencies.

  D. Discuss unit and specific objectives.

  E. Discuss information and assignment sheets.

  F. Invite an eye, ear, nose, and throat specialist to speak on diagnostic tests, disorders, and treatments.

  G. Invite ophthalmologist and otologist to speak on their specialty areas.

  H. Obtain animal organs to demonstrate anatomy and physiology.

  Examples: Tongue, eyes

  I. Obtain color perception chart, to be used to test color blindness, from local optometrist and discuss use.

  J. Offer to test vision for other staff members or other classes to give opportunity for students to practice Job Sheet #1.

  K. Demonstrate and discuss procedures outlined in job sheets.

  L. Provide equipment and allow time for return demonstration of job sheets.

  M. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--The Eye

    2. TM 2--Muscles of the Eyeball

    3. TM 3--The Eye and Accessory Structures

    4. TM 4--The Ear

5. TM 5--The Tongue and Taste

6. TM 6--The Nose and Sense of Smell

D. Assignment Sheet #1--Describe Reaction of Taste Buds

E. Job sheets

1. Job Sheet #1--Measure Vision

2. Job Sheet #2--Prepare Ophthalmoscope and Otoscope for Use

3. Job Sheet #3--Irrigate Ear

4. Job Sheet #4--Administer Eye, Ear, and Nose Medication

F. Test

G. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

C. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

D. Thomas, Clayton L., M.D., ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

IV. Additional materials:

A. Films:

1. "Eyes and Their Care." Oklahoma State Department of Health, Northeast 10th and Stonewall, Oklahoma City, Oklahoma 73104.

2. "You and Your Ears." Oklahoma State Department of Health.

3. "Sense of Hearing." Southwestern Bell Telephone Company; call local company for information.

B. Filmstrip--"The Special Senses." Robert J. Brady Company, a Prentice Hall Co., Bowie, Maryland 20715.

SPECIAL SENSES
UNIT XI

INFORMATION SHEET

I. Terms and definitions

A. Accommodation--Adjustment by the lens to make a sharp, clear image on the retina

B. Auditory--Pertaining to the sense of hearing

C. Cerumen--Waxlike, soft, brown secretion found in the external ear canal; lubricates and protects external canal and tympanum/tympanic membrane

D. Equilibrium--Normal orientation of the body in respect to its environment

E. Extrinsic--Outside a part

F. Incus--Anvil-shaped bone of the middle ear

G. Intrinsic-Within a part

H. Malleus--Hammer-shaped bone of the middle ear

I. Olfactory--Pertaining to sense of smell

J. Ophthalmologist--Physician who specializes in the treatment of eye disorders

K. Ophthalmology--Study of the eye and its diseases

L. Orbit--Cavity in the bone in which the eye is located

(NOTE: The orbit is lined with a layer of fatty tissue and acts as protection for eye.)

M. Otology--Study of the ear and its diseases

(NOTE: Oto refers to the ear.)

N. Pupil--Opening in the iris which permits light to enter

O. Sense--General faculty through which conditions outside or inside the body are perceived

P. Stapes--Stirrup-shaped bone of middle ear

Q. Taste buds--Receptors of taste found in the tongue

INFORMATION SHEET

II. Basic senses

- A. Special senses
    - 1. Vision
    - 2. Hearing
    - 3. Taste
    - 4. Smell
- B. Hunger and thirst
- C. Touch, pressure, temperature, and pain
- D. Position and balance

III. Functions of the eye and accessory structures (Transparencies 1, 2, and 3)

- A. Conjunctiva--Covers the front of the eyeball; lines the eyelid; aids in keeping the eye moist
- B. Choroid--Middle vascular layer on lateral and posterior eyeball; supplies oxygen and nutrients
- C. Iris--Circular muscle; regulates amount of light entering pupil; the pigmented or colored part of the eye
- D. Ciliary muscle--Controls shape of lens to make sharp, clear image
- E. Sclera--Outer white layer of firm, connective tissue covering the eyeball
- F. Cornea--Clear, transparent part of the sclera on the front of eyeball; allows light through
- G. Lens--Circular jelly-like suspension; focuses images on retina
- H. Suspensory or ciliary ligament--Hold lens in place
- I. Anterior chamber--Space in front of lens between cornea and iris
- J. Posterior chamber--Space between iris and lens
- K. Vitreous humor--Jelly-like substance filling the eyeball posterior to the lens; maintains shape of eyeball
- L. Retina--Inner layer of nerve tissue made up in part of rods and cones, special light sensitive cells; receives visual images
- M. Optic nerve--Carries visual impulses from retina to brain

INFORMATION SHEET

N. Lacrimal gland--Lies superior and lateral to eyeball; secretes tears which moisten and cleanse eye and destroy some bacteria

O. Lacrimal ducts--In upper and lower eyelids at inner edge; carry tears from eye to nasal cavity

P. Eyelid muscles--Levators which open and close eyelids

Q. Oculomotor nerve--Controls part of eye muscles

R. Ophthalmic nerve--Carries impulses of pain, touch, and temperature from eye and surrounding parts

IV. Structures of the ear (Transparency 4)

A. Outer ear

1. Pinna or auricle

(NOTE: The pinna catches air vibrations or sounds.)

2. External auditory canal

(NOTE: The external auditory canal guides air vibrations to the tympanic membrane.)

3. Tympanic membrane (eardrum)

(NOTE: The tympanic membrane protects the middle ear and vibrates when sounds strike it; it is also known as *eardrum* or *tympanum*.)

B. Middle ear

1. Ossicles

a. Malleus

b. Incus

c. Stapes

(NOTE: Malleus, incus, and stapes amplify sound waves received from the tympanum and transmit waves to inner ear.)

2. Oval window

(NOTE: The oval window permits passage of sound waves from ossicles to inner ear.)

INFORMATION SHEET

3. Round window

   (NOTE: The round window separates middle and inner ear.)

4. Eustachian tubes

   (NOTE: The eustachian tubes regulate pressure in middle ear to equal pressure outside tympanum.)

C. Inner ear

1. Cochlea

   (NOTE: The cochlea contains corti, the organ for hearing.)

2. Vestibule

   (NOTE: The vestibule controls the sense of position.)

3. Semicircular canals

   (NOTE: The semicircular canals control equilibrium.)

V. Common diseases, disorders, and procedures associated with special senses

A. Cataract--Opacity or cloudiness of the lens of the eye

B. Glaucoma--Condition in which there is an excess of eye fluid, causing pressure on the eye

C. Sty--Infection of glands that empty at the free edge of the eyelid

D. Tonometer--Instrument that measures pressure in the eyeball

E. Otitis--Inflammation of the ear

   (NOTE: The condition is named for the portion of the ear affected; otitis external/outer ear, otitis media/middle, and otitis internal/inner ear.)

F. Meniere's syndrome--Condition involving sudden attacks of dizziness, nausea, and ringing in the ears

G. Otoscope--Instrument to examine the ear

H. Ophthalmoscope--Instrument to examine the eye

I. Audiometer--Instrument to test hearing

J. Myringotomy--Incision of the tympanic membrane

INFORMATION SHEET

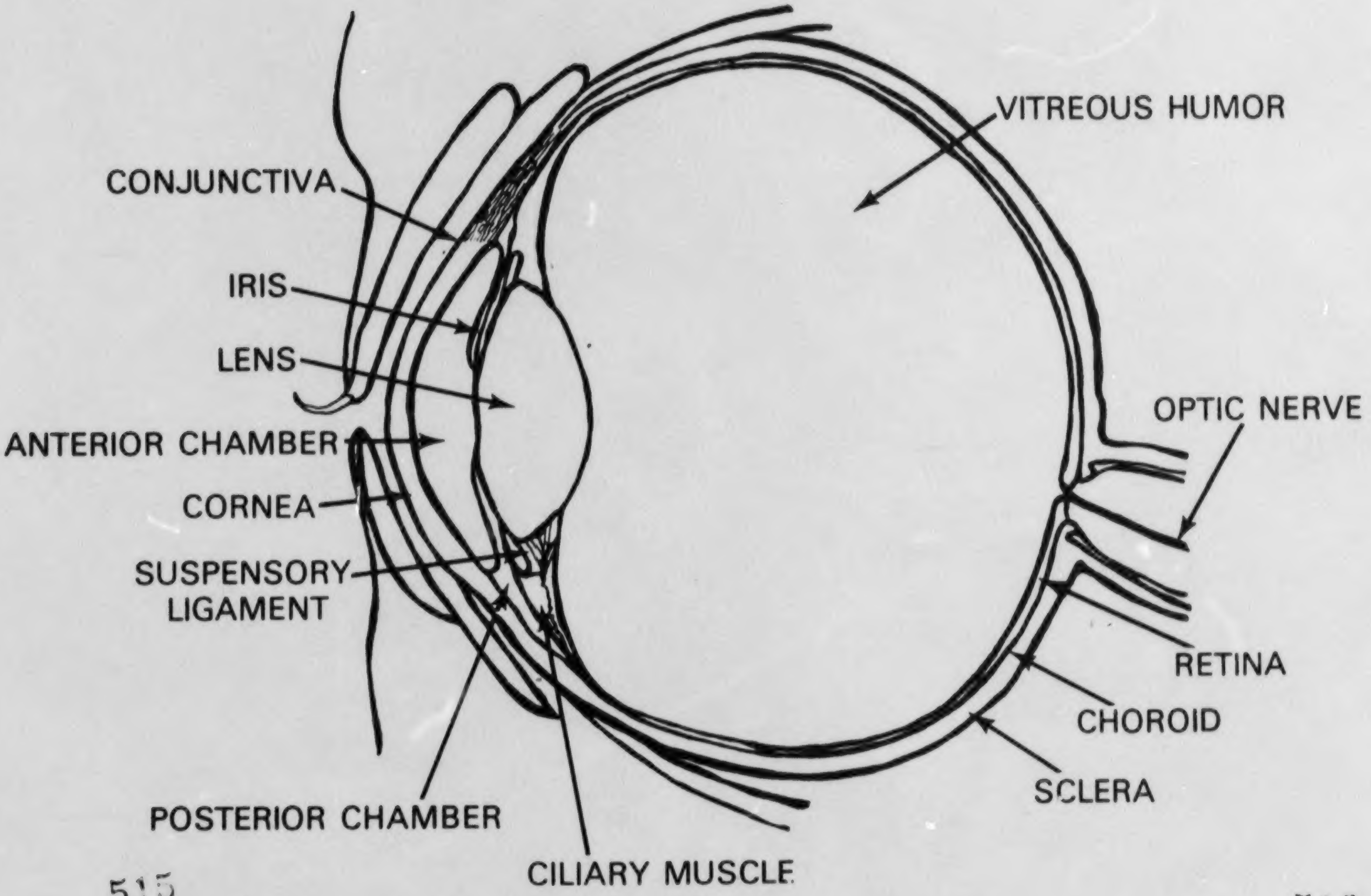
VI. Sense of taste (Transparency 5, Assignment Sheet #1)

- A. Taste buds relay impulses to two different nerves which carry the impulses to the brain
- B. Taste buds are stimulated only if substance to be tasted is in solution
- C. Different kinds of taste buds have separate locations on the tongue
    1. Sweet taste is located near the tip of the tongue
    2. Sour taste is located at the sides of the tongue
    3. Salty taste is located near the tip of the tongue
    4. Bitter taste is located at the back of the tongue

VII. Sense of smell (Transparency 6)

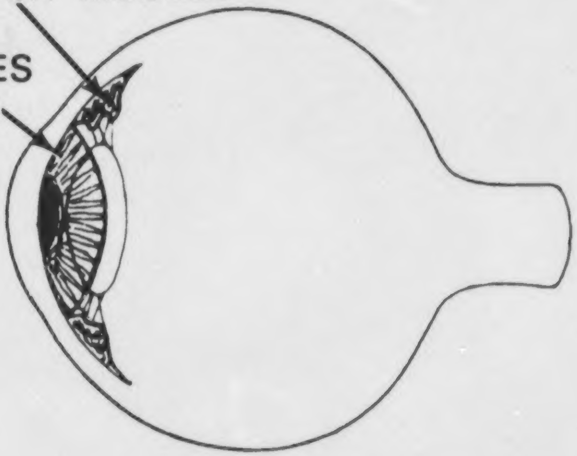
- A. Sense of smell is closely related to the sense of taste
- B. Receptors are located in the olfactory epithelium in the upper part of the nasal cavity
- C. Olfactory nerve carries smell impulses to the brain
- D. Olfactory nerves tire quickly and become less sensitive after detecting the same odor for a period of time

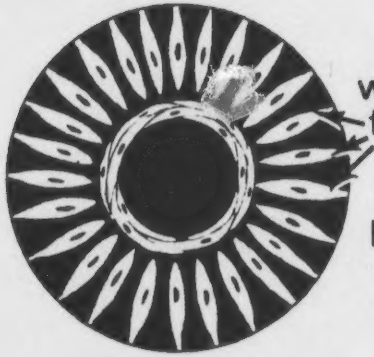
The Eye


VITREOUS HUMOR
CONJUNCTIVA
IRIS
LENS
ANTERIOR CHAMBER
CORNEA
SUSPENSORY LIGAMENT
OPTIC NERVE
RETINA
CHOROID
SCLERA
POSTERIOR CHAMBER
CILIARY MUSCLE

Muscles of the Eyeball

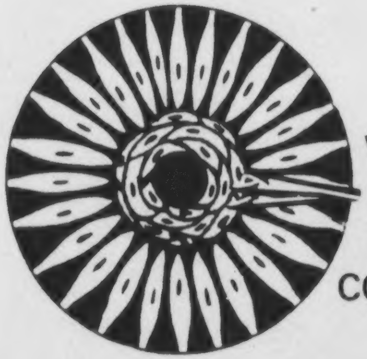
EYE MUSCLES


CILIARY MUSCLE
MUSCLES OF IRIS

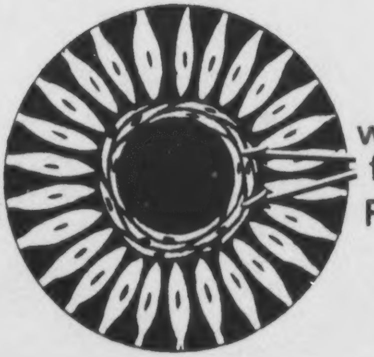


when radial muscle fibers of iris contract:

PUPIL IS DILATED

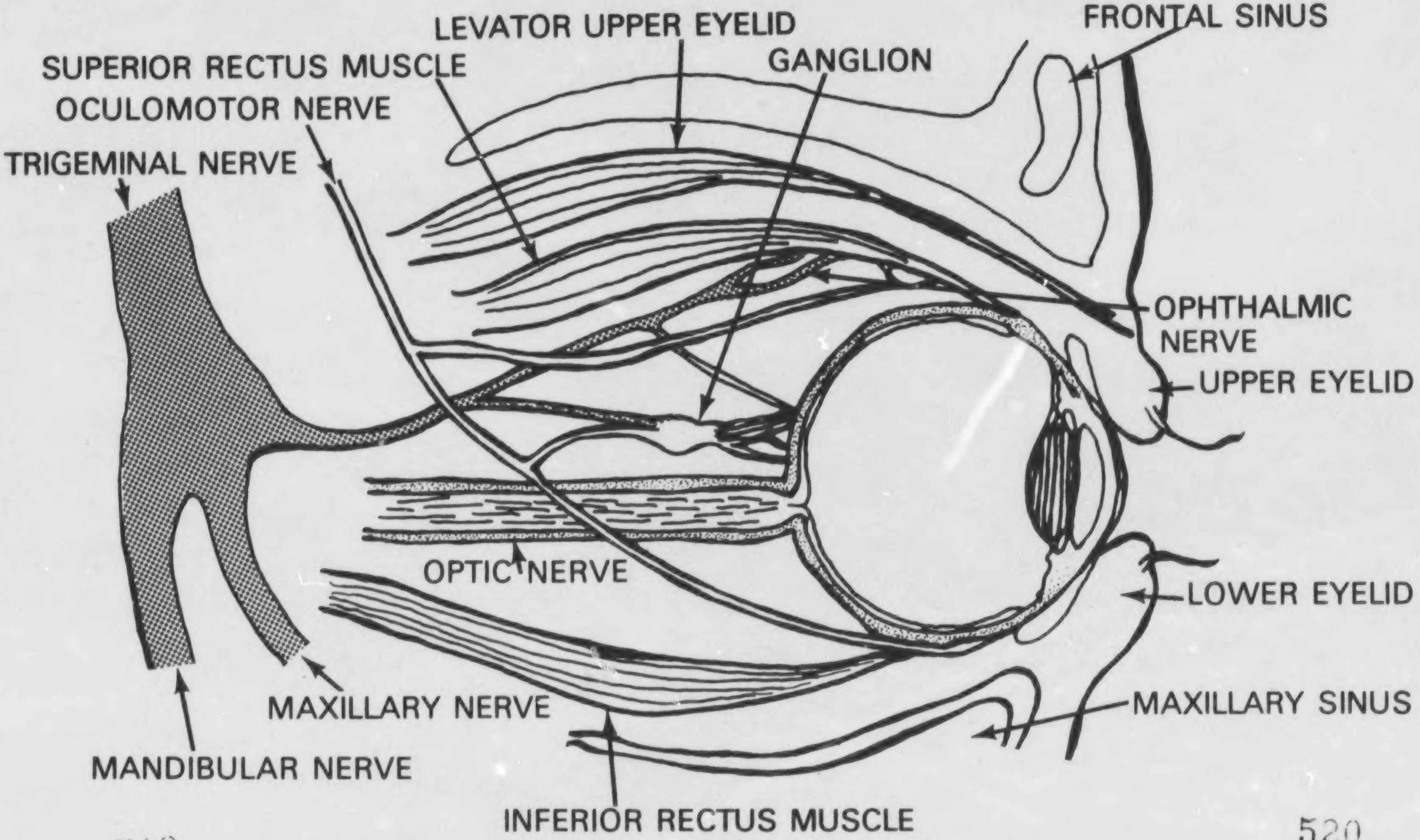


when circular muscle fibers of iris contract:
PUPIL IS CONSTRICTED

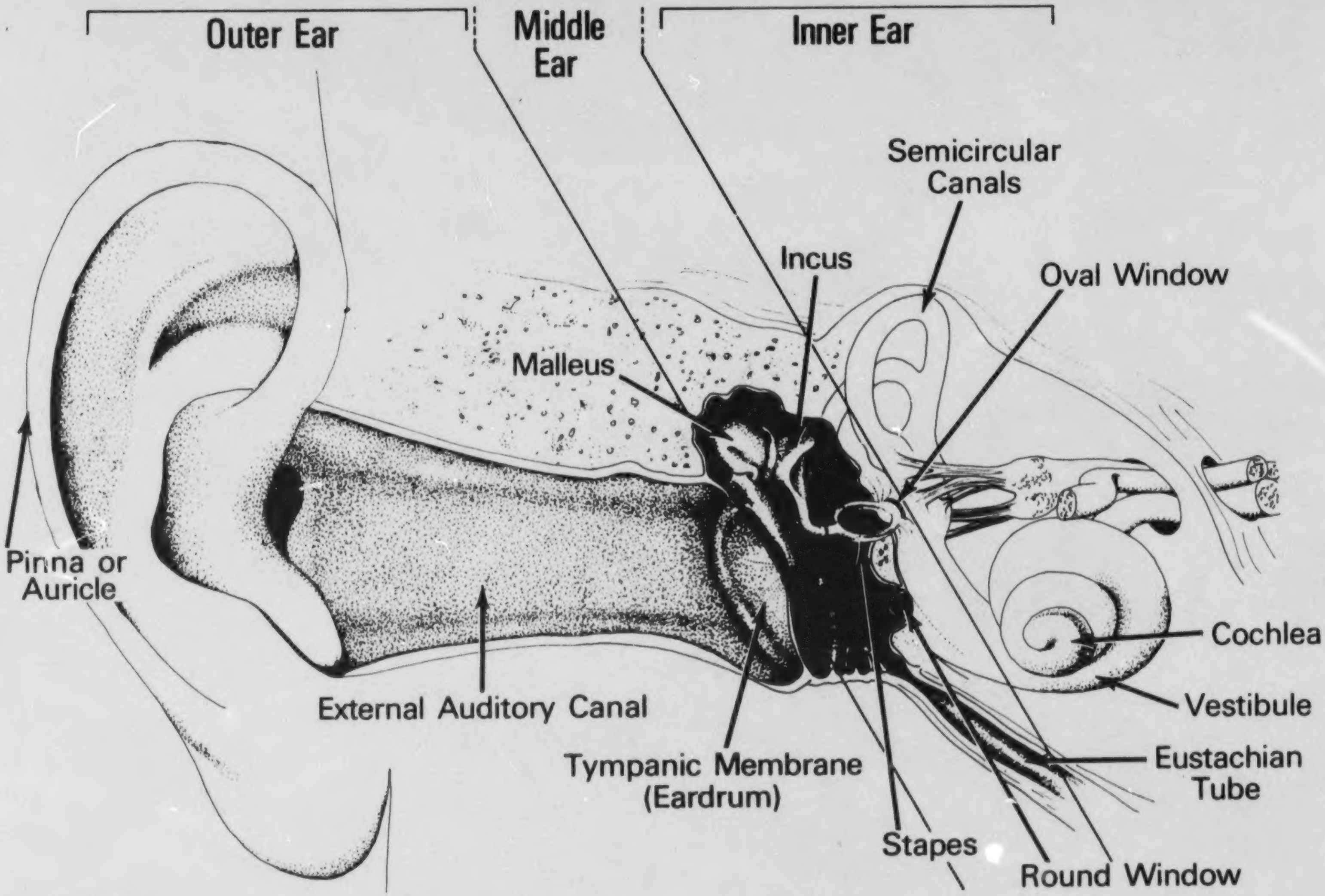


when circular muscle fibers of iris relax:
PUPIL IS DILATED

The Eye and Accessory Structures


LEVATOR UPPER EYELID
FRONTAL SINUS
SUPERIOR RECTUS MUSCLE
GANGLION
OCULOMOTOR NERVE
TRIGEMINAL NERVE
OPHTHALMIC NERVE
UPPER EYELID
OPTIC NERVE
LOWER EYELID
MAXILLARY NERVE
MAXILLARY SINUS
MANDIBULAR NERVE
INFERIOR RECTUS MUSCLE

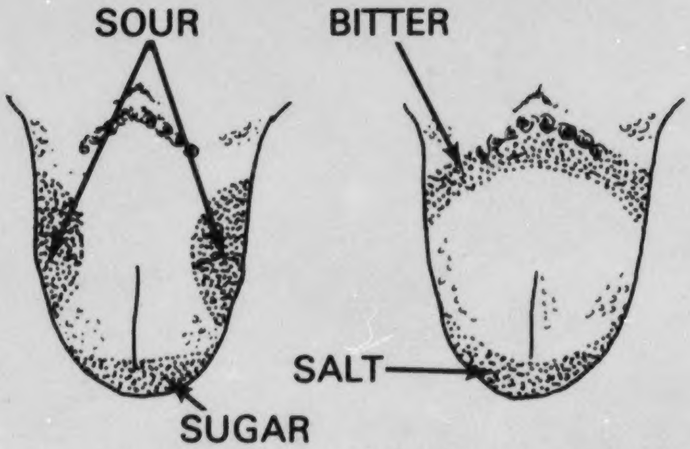
The Ear


Outer Ear
Middle Ear
Inner Ear
Semicircular Canals
Incus
Oval Window
Malleus
Pinna or Auricle
Cochlea
External Auditory Canal
Vestibule
Tympanic Membrane (Eardrum)
Eustachian Tube
Stapes
Round Window

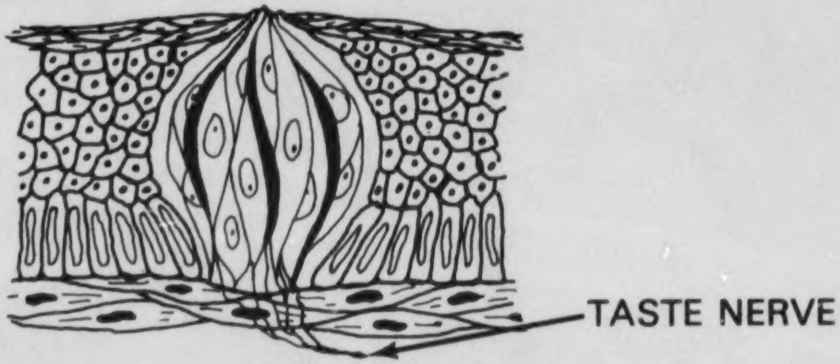
TM 4

MA - 453-B

The Tongue and Taste

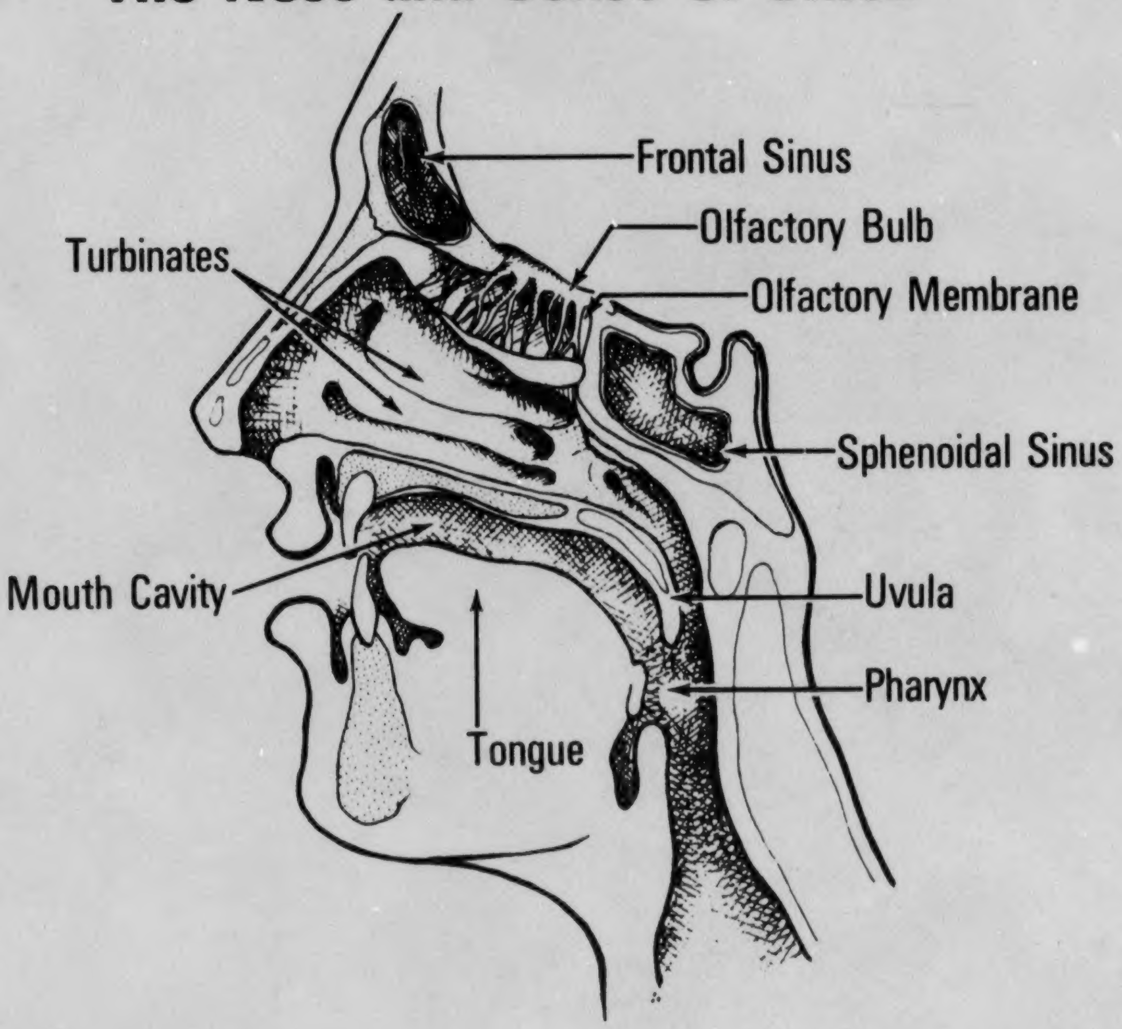

SOUR
BITTER
SALT
SUGAR

Location on the Tongue of the Four Basic Taste Sensations


TASTE NERVE

Taste Buds are Special Cells on the Tongue containing Nerve Endings Sensitive to Taste

The Nose and Sense of Smell


Frontal Sinus
Olfactory Bulb
Turbinates
Olfactory Membrane
Sphenoidal Sinus
Mouth Cavity
Uvula
Pharynx
Tongue

SPECIAL SENSES
UNIT XI

ASSIGNMENT SHEET #1--DESCRIBE REACTION OF TASTE BUDS

NAME ____ SCORE ____________

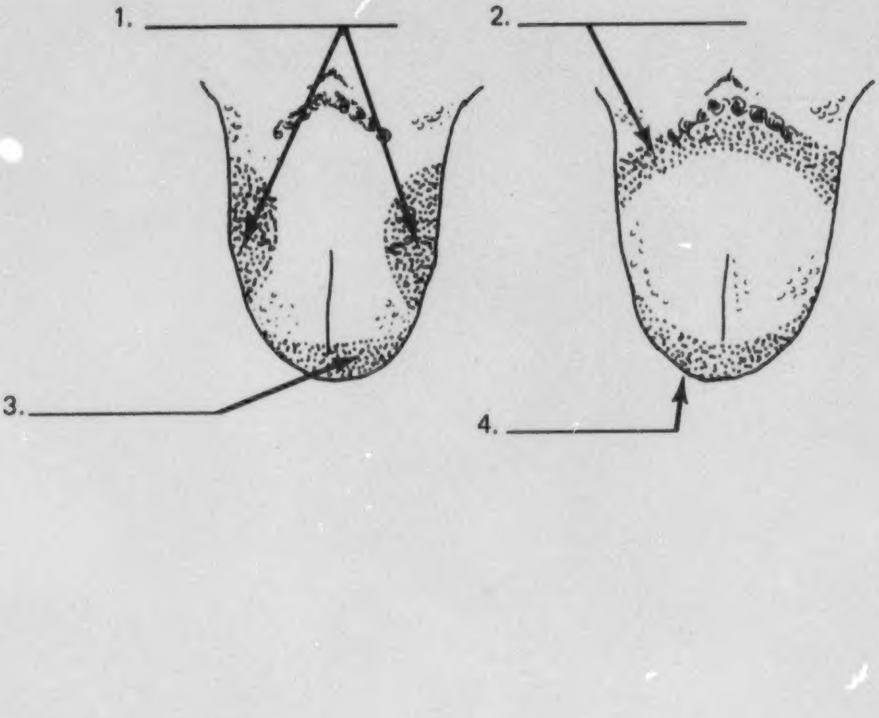
Taste is an important factor in good health and nutrition. Most people enjoy eating foods that taste good and avoid bad-tasting substances.

Using the knowledge you have of the taste buds and their areas, choose a partner to help you test your taste buds.

After blindfolding your partner, choose different substances to give as samples. Record your partner's reactions to the different tastes below.

Offer sour, sweet, salty, bland, and bitter substances to taste. Try each substance on the different areas of the tongue and the taste bud areas.

On the drawing below, label where your partner reacted to each substance.



SPECIAL SENSES
UNIT XI

JOB SHEET #1--MEASURE VISION

I. Equipment needed

A. Snellen test chart

B. Disposable card or cup

II. Procedure

(NOTE: The power of vision is usually measured by having the individual read the Snellen test chart. Lines of letters of varying size are printed on the chart and beside each line is given the distance at which it can be read by persons having normal vision.)

A. Have subject being tested sit 6 m (20 ft) from the Snellen chart with eyes at level of 6 m (20 ft) line on chart

B. Cover one eye with disposable card or cup

C. Have subject read the letters as far as possible with the uncovered eye beginning with an upper line and reading down

(NOTE: If the person can read the line marked for vision at twenty feet, he/she has 20/20 vision. If she/he is only able to read the line that can be read by the normal eye at one hundred feet, vision for that eye is 20/100. If he/she can read the line that the normal eye can read at fifteen feet, vision is better than normal, 20/15.)

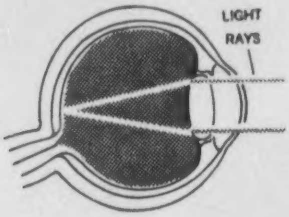
D. Determine the subject's vision for each eye separately

(NOTE: If person wears glasses or contact lenses, check vision with and without their use.)

E. Check for the following possible conditions

1. Emmetropia--Normal vision; objects at twenty feet form sharp images on the retina (Figure 1)

FIGURE 1



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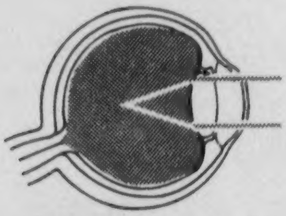
JOB SHEET #1

2. Myopia--Near-sightedness; objects at or beyond twenty feet form sharp images in front of the retina (Figure 2)

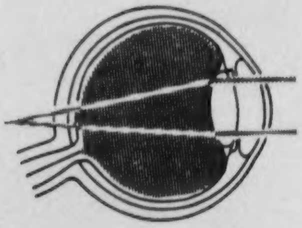
FIGURE 2



Used with permission of the F.A. Davis Company from *Taber's Cyclopedic Medical Dictionary*, 13th ed., copyright 1977, page E-23.

3. Hyperopia--Far-sightedness; objects at twenty feet form sharp images behind the retina (Figure 3)

FIGURE 3



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4. Astigmatism--Visual defect in the shape of the eyeball or lens so that light rays are focused unequally in the two eyes

5. Strabismus--Cross-eye; occurs when the muscles of the eyes do not coordinate so that the eyes do not work together

SPECIAL SENSES
UNIT XI

JOB SHEET #2--PREPARE OPHTHALMOSCOPE AND OTOSCOPE FOR USE

(NOTE: As a routine, most physicians will want to examine the patient's eyes, ears, and nose. The MA should have equipment ready for use.)

I. Equipment

A. Ophthalmoscope (Figure 1)

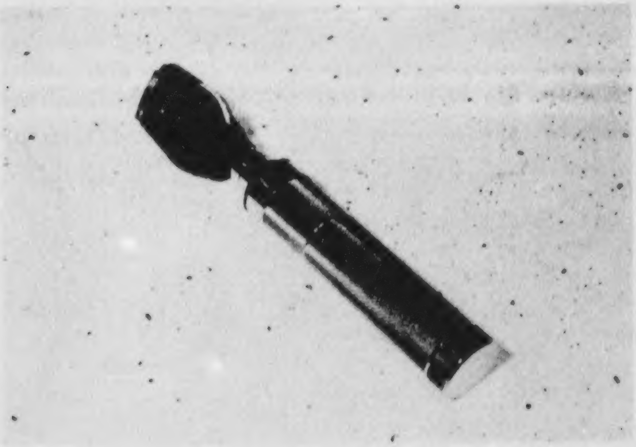


FIGURE 1

B. Otoscope (Figure 2)

(NOTE: There are different cone-shaped speculums [tips] that are used for different types of exams. It is especially important to use a smaller tip for the pediatric patient.)

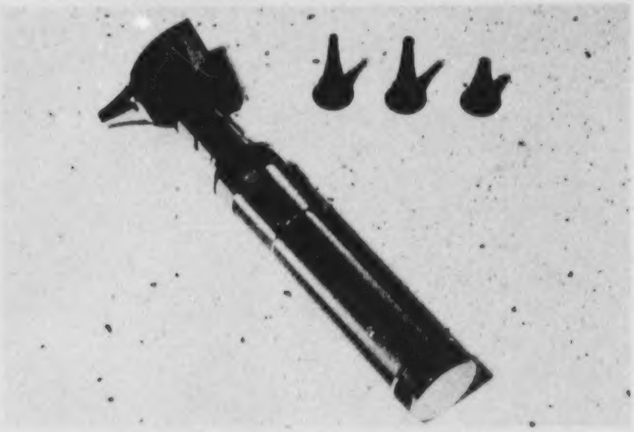


FIGURE 2

C. Cleansing solution or alcohol swabs

JOB SHEET #2

II. Procedure

A. Remove ophthalmoscope and otoscope from cases

B. Make sure that light sources for each are working

(NOTE: Most of these instruments can be recharged from any electrical outlet or their own power source. Check periodically to make sure light source is ready.)

C. Lay out the tips to use for the otoscope that the physician may need

D. Place a tongue blade out on a paper towel or gauze pad

(NOTE: Many times physicians will use the light source to look at the patient's mouth and throat, using the tongue blade to stabilize the tongue and move it so that a more thorough exam can be done.)

E. Clean instruments after use, or discard properly if disposable

(NOTE: Many manufacturers will recommend a cleansing solution to use on tips used in direct contact with patient's body. Make sure that each piece of equipment is cleaned thoroughly.)

F. Make sure light source is off and replace instruments in cases

SPECIAL SENSES
UNIT XI

JOB SHEET #3--IRRIGATE EAR

(NOTE: Many times, cerumen will fill the ear and impair hearing, making patient very uncomfortable. At this time many physicians will recommend the ear be irrigated. If the secretion is not difficult to remove, the MA might be the one to irrigate and remove the plug.)

I. Equipment

  A. Towel

  B. Irrigating ear syringe (Figure 1)

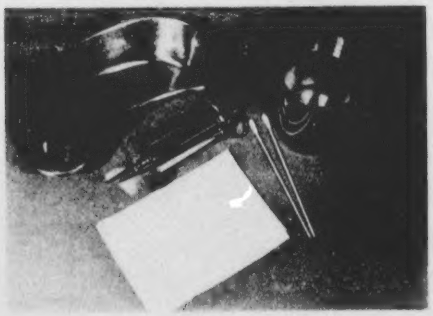


FIGURE 1

  C. Basin

  D. Irrigation solution

  (NOTE: Irrigating solution may be warmed to 100-105°F.)

II. Procedure

  A. Wash hands

  B. Assemble equipment

  C. Identify patient and explain procedure

  D. Drape towel over the shoulder on the affected side

  E. Place basin under the ear or have patient hold it in place if possible

  F. Draw tepid water into irrigating syringe and expel any remaining air

  (NOTE: Test on your hand to make sure the water is not too cold or hot as this could be quite painful and cause damage to inner ear.)

  G. Place tip of syringe into ear

  (NOTE: Be sure ear canal is straight by pulling ear upward and backward for adult and downward and backward for a child.)

JOB SHEET #3

H. Push plunger of syringe at an even force causing a steady but not too rapid stream of water into the ear

(NOTE: You should see immediate return of the water into the basin. Check contents to see it any of the cerumen has been removed.)

(CAUTION: This procedure should not cause undo pain but if the patient does complain of pain stop immediately and have physician look at ear. The pain may be caused by an extreme inflammation of the ear that could not be seen when first viewed.)

I. Repeat procedure if needed

(NOTE: Physician may want to look at ear to determine if manual removal is needed.)

J. Pat outer ear dry and just inside the auricle

(NOTE: Some physicians like to follow the irrigation with alcohol swabs to help dry the canal more quickly. Follow instructions given to you.)

SPECIAL SENSES
UNIT XI

JOB SHEET #4--ADMINISTER EYE, EAR, AND NOSE MEDICATIONS

(NOTE: Many times in the medical office, the MA will give an initial dose of eye, ear, or nose medication, then instruct patient or parent in the use at home.)

I. Equipment

   A. Medication

   B. 4 x 4's or tissue wipes

II. Procedure for eye medications

   A. Check with physician to make sure medication order is correct

   (NOTE: Determine amount of medication to be used and whether instillation is for one or both eyes.)

   B. Wash hands

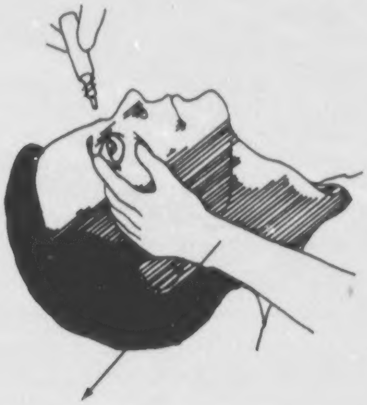
   C. Assemble equipment

   D. Identify patient and explain procedure

   E. Position patient for ease of instillation

   F. Separate eyelids with fingers of one hand, holding a 4 x 4 or tissue to absorb excess fluid or ointment; do not press on eyeball (Figure 1)

FIGURE 1

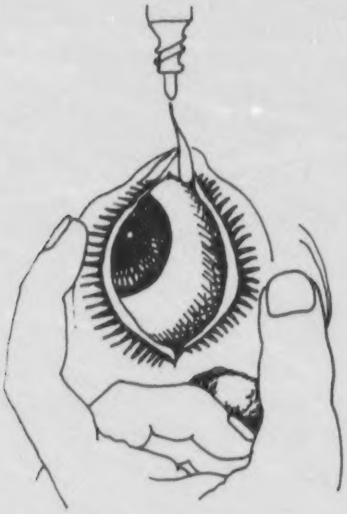


JOB SHEET #4

G. Have patient look upward to remove the sensitive cornea from the point of instillation

H. Place prescribed drops near inner canthus if drops are used, or place line of ointment along lower eyelid; do not allow dispenser to touch the eye (Figure 2)

FIGURE 2



I. Have patient close eye

J. Apply dressing, if directed

K. Provide for patient's comfort

L. Return equipment to proper place

M. Wash hands

N. Record treatment

O. Give patient instructions for home use

III. Procedure for ear medications

A. Check with physician to make sure medication order is correct

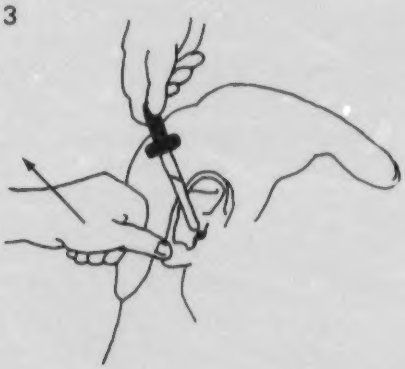
B. Wash hands

C. Assemble equipment

JOB SHEET #4

D. Position patient by turning head so that the ear being treated faces upward (Figure 3)

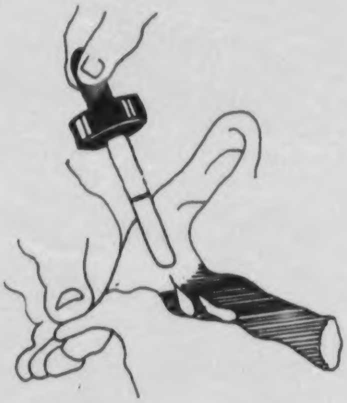
FIGURE 3



E. Hold external ear gently to expose the orifice
   1. For an adult, pull pinna up and back
   2. For a child, pull lobe down and back

F. Drop the medication against the internal wall of the canal (Figure 4)

FIGURE 4



G. Place small cotton ball in outer ear to cover orifice

H. Provide for patient's comfort

I. Return equipment to proper place

JOB SHEET #4

J. Wash hands

K. Record treatment

L. Give patient instructions for home use

IV. Procedure for nose instillations

A. Check with physician to make sure medication order is correct

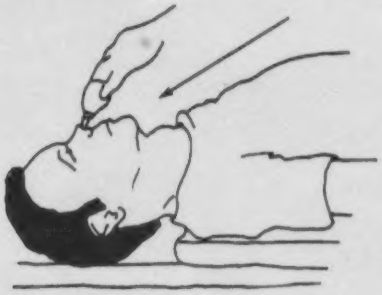
B. Wash hands

C. Assemble equipment

D. Identify patient and explain procedure

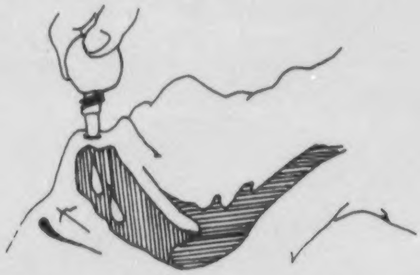
E. Tilt patient's head back by elevating the shoulders with a pillow or by having the patient hang his head over the edge of the bed (Figure 5)

FIGURE 5



F. Instill prescribed amount (Figure 6)

FIGURE 6



G. Provide for patient's comfort

H. Return equipment to proper place

I. Wash hands

J. Record treatment

K. Give patient instructions for home use

SPECIAL SENSES
UNIT XI

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with the special senses to the correct definitions. Place the correct numbers in the blanks provided.

______a. Study of the eye and its diseases

______b. Adjustment by the lens to make a sharp clear image on the retina

______c. Study of the ear and its diseases

______d. Pertaining to sense of smell

______e. General faculty through which conditions outside or inside the body are perceived

______f. Receptors of taste found in the tongue

______g. Cavity in the bone in which the eye is located

______h. Normal orientation of the body in respect to its environment

______i. Pertaining to the sense of hearing

______j. Opening in the iris which permits light to enter

______k. Stirrup-shaped bone of middle ear

______l. Anvil-shaped bone of middle ear

______m. Physician who specializes in the treatment of eye disorders

______n. Hammer-shaped bone of the middle ear

______o. Waxlike, soft, brown secretion found in the external ear canal; lubricates and protects external canal and tympanum/tympanic membrane

______p. Within a part

______q. Outside a part

1. Ophthalmology
2. Otology
3. Sense
4. Orbit
5. Auditory
6. Accommodation
7. Olfactory
8. Taste buds
9. Equilibrium
10. Malleus
11. Incus
12. Stapes
13. Pupil
14. Cerumen
15. Extrinsic
16. Intrinsic
17. Ophthalmologist

2. Name the basic senses.

   a. ____________________

      1) ____________________

      2) ____________________

      3) ____________________

      4) ____________________

   b. ____________________

   c. ____________________

   d. ____________________

3. Match eye and accessory structures to the correct functions. Place the correct numbers in the blanks provided.

_____a. Controls shape of lense to make sharp, clear image

_____b. Controls part of eye muscles

_____c. Clear, transparent part of the sclera on the front of eyeball; allows light through

_____d. Holds lens in place

_____e. Inner layer of nerve tissue made up in part of rods and cones, special light-sensitive cells; receives visual images

_____f. Levators which open and close eyelids

_____g. Carries visual impulses from retina to brain

_____h. Covers the front of the eyeball; lines the eyelid; aids in keeping the eye moist

_____i. Circular muscle; regulates amount of light entering pupil; the pigmented or colored part of the eye

_____j. Jelly-like substance filling the eyeball posterior to the lens; maintains shape of eyeball

_____k. Circular jelly-like suspension; focuses images on retina

1. Cornea
2. Oculomotor nerve
3. Suspensory or ciliary ligament
4. Retina
5. Ciliary muscle
6. Eyelid muscles
7. Optic nerve
8. Vitreous humor
9. Conjunctiva
10. Iris
11. Lens

_____l. Middle vascular layer on lateral and posterior eyeball; supplies oxygen and nutrients

_____m. Outer white layer of firm, connective tissue covering the eyeball

_____n. Space in front of lens between cornea and iris

_____o. Space between iris and lens

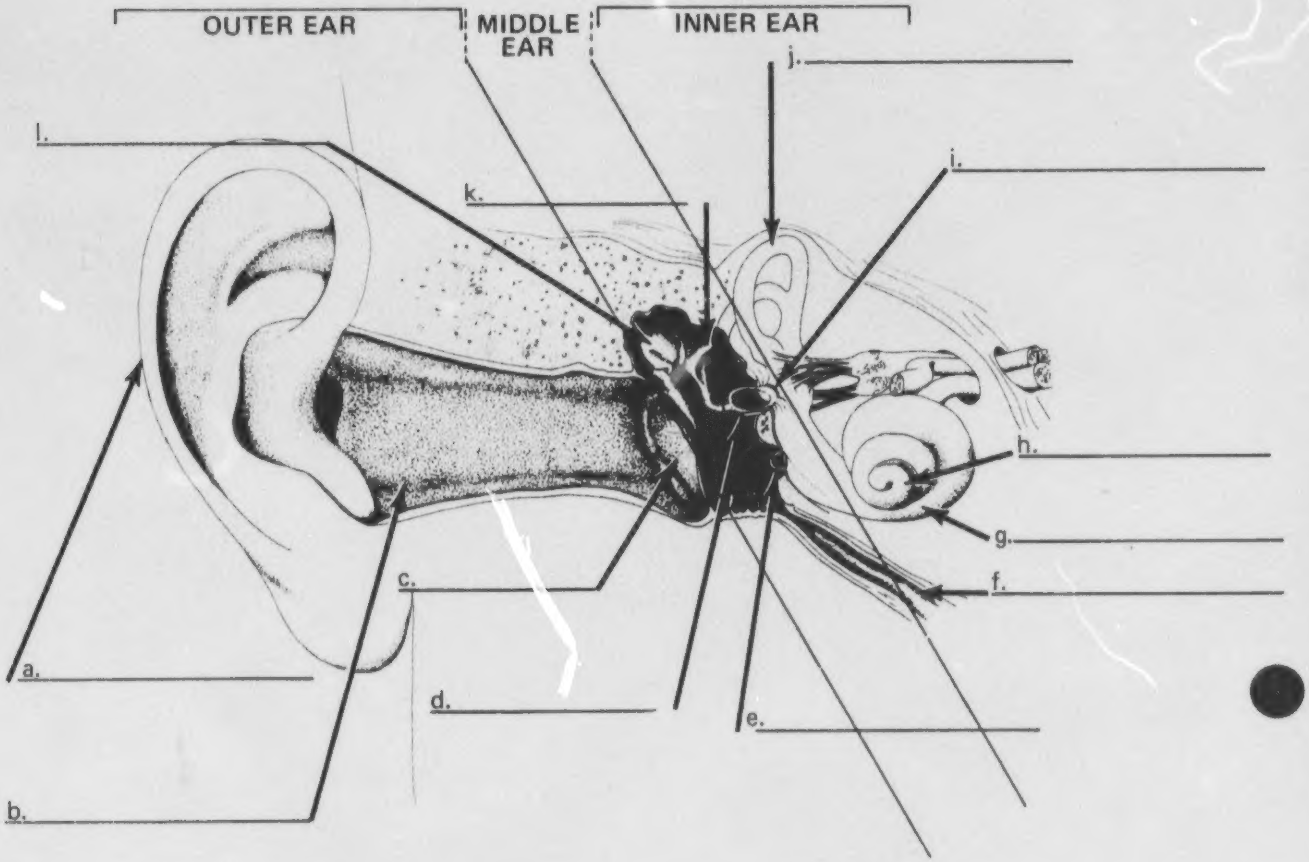
_____p. Carries impulses of pain, touch, and temperature from eye and surrounding parts

_____q. In upper and lower eyelids at inner edge; carry tears from eye to nasal cavity

_____r. Lies superior and lateral to eyeball; secretes tears which moisten and cleanse eye and destroy some bacteria

12. Choroid
13. Sclera
14. Lacrimal gland
15. Lacrimal ducts
16. Anterior chamber
17. Posterior chamber
18. Ophthalmic nerve

4. Identify the structures of the ear. Place the correct names in the blanks provided.


OUTER EAR
MIDDLE EAR
INNER EAR
j.
l.
i.
k.
h.
g.
f.
c.
a.
d.
e.
b.

Vestibule

Stapes

Malleus

Pinna or auricle

Oval window

Incus

Round window

Cochlea

External auditory canal

Semicircular canals

Eustachian tube

Tympanic membrane (eardrum)

5. Match common diseases, disorders, and procedures associated with the special senses to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Inflammation of the ear

_____b. Instrument to examine the ear

_____c. Infection of glands that empty at the free edge of the eyelid

_____d. Condition involving sudden attacks of dizziness, nausea, and ringing in the ears

_____e. Incision of the tympanic membrane

_____f. Instrument to test hearing

_____g. Instrument to examine the eye

_____h. Condition in which there is an excess of eye fluid, causing pressure on the eye

_____i. Opacity or cloudiness of the lens of the eye

_____j. Instrument that measures pressure in the eyeball

1. Otitis
2. Otoscope
3. Cataract
4. Meniere's syndrome
5. Ophthalmoscope
6. Sty
7. Audiometer
8. Myringotomy
9. Tonometer
10. Glaucoma

6. Discuss the sense of taste.

____

____

____

____

7. Discuss the sense of smell.

____

____

____

____

8. Describe reaction of taste buds.
9. Demonstrate the ability to:
    a. Measure vision.
    b. Prepare ophthalmoscope and otoscope for use.
    c. Irrigate ear.
    d. Administer eye, ear, and nose medication.

(NOTE: If activities 8 and 9 have not been finished before the test, ask your instructor when they should be completed.)

SPECIAL SENSES
UNIT XI

ANSWERS TO TEST

1. a. 1
   b. 6
   c. 2
   d. 7
   e. 3
   f. 8
   g. 4
   h. 9
   i. 5
   j. 13
   k. 12
   l. 11
   m. 17
   n. 10
   o. 14
   p. 16
   q. 15

2. a. Special senses
      1) Vision
      2) Hearing
      3) Taste
      4) Smell
   b. Hunger and thirst
   c. Touch, pressure, temperature, and pain
   d. Position and balance

3. a. 5
   b. 2
   c. 1
   d. 3
   e. 4
   f. 6
   g. 7
   h. 9
   i. 10
   j. 8
   k. 11
   l. 12
   m. 13
   n. 16
   o. 17
   p. 18
   q. 15
   r. 14

4. a. Pinna or auricle
   b. External auditory canal
   c. Tympanic membrane (eardrum)
   d. Stapes
   e. Round window
   f. Eustachian tube
   g. Vestibule
   h. Cochlea
   i. Oval window
   j. Semicircular canals
   k. Incus
   l. Malleus

5. a. 1
   b. 2
   c. 6
   d. 4
   e. 8
   f. 7
   g. 5
   h. 10
   i. 3
   j. 9

6. Discussion should include:
   a. Taste buds relay impulses to two different nerves which carry the impulses to the brain
   b. Taste buds are stimulated only if substance to be tasted is in solution
   c. Different kinds of taste have separate locations on the tongue
      1) Sweet taste is located near the tip of the tongue
      2) Sour taste is located at the sides of the tongue
      3) Salty taste is located near the tip of the tongue
      4) Bitter taste is located at the back of the tongue

7. Discussion should include:
    - a. Sense of smell is closely related to the sense of taste
    - b. Receptors are located in the olfactory epithelium in the upper part of the nasal cavity
    - c. Olfactory nerve carries smell impluses to the brain
    - d. Olfactory nerves tire quickly and become less sensitive after detecting the same odor for a period of time
8. Evaluated to the satisfaction of the instructor
9. Performance skills evaluated to the satisfaction of the instructor

CIRCULATORY SYSTEM
UNIT XII

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the circulatory system to assist in diagnostic tests, treatment of problems, and in patient education. The student should also be able to apply EKG leads. This knowledge will be evidenced by completion of job sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the circulatory system to the correct definitions.
2. Select from a list functions of the circulatory system.
3. Identify structures of the heart.
4. Identify major arteries and veins.
5. Name major blood vessels of the head.
6. State ways to help prevent heart and circulatory ailments.
7. Match common diseases, disorders, and procedures related to the circulatory system to the correct definitions.
8. Demonstrate the ability to apply electrodes, leads, and run an EKG.

CIRCULATORY SYSTEM
UNIT XII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information and job sheets.

  C. Make transparencies.

  D. Discuss unit and specific objectives.

  E. Discuss information sheet.

  F. Invite resource persons to speak to class or HOSA chapter meetings.

  Example: Cardiologist, EKG technician

  G. Obtain animal organs to demonstrate the anatomy of the circulatory system.

  H. Obtain information from the Heart Association to supplement material on circulatory problems or maintaining a healthy heart.

  (NOTE: Write to the American Heart Association, 44 E. 23rd St., New York, New York 10010.)

  I. Provide equipment and demonstrate procedures outlined in job sheet.

  J. Allow time for return demonstration.

  K. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Structure of the Heart

    2. TM 2--Principal Veins

    3. TM 3--Principal Arteries

    4. TM 4--The Lymphatic Structures

D. Job Sheet #1--Apply Electrodes, Leads, and Run an EKG

E. Test

F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1977.

C. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

D. Clayton, Thomas L., M.D., ed., *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

IV. Additional materials:

A. Films:

1. "I am Joe's Heart." Available from Pyramid Films, 2801 Colorado Avenue, Santa Monica, California 90404.

2. "Heart and Circulatory Systems." Available from Films Incorporated, 1144 Wilmette Avenue, Willmette, Illinois 60091.

(NOTE: The above films are available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 W. Sixth Avenue, Stillwater, Oklahoma 74074. Out-of-state teachers must order from addresses listed.)

B. Filmstrips:

1. "Hypertension. High Blood Pressure." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

2. "Understanding the Cardiac Work-Up." Trainex Corporation.

3. "Common Electrocardiographic Abnormalities." Trainex Corporation.

C. Transparency kit--"Polar Motion Transparency with Motion. Pulmonary and Systemic Circulation, General Structural and Functional Aspects of the Circulatory System."

(NOTE: This kit is available for purchase from Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1515 W. Sixth Avenue, Stillwater, Oklahoma 74074.)

CIRCULATORY SYSTEM
UNIT XII

INFORMATION SHEET

I. Terms and definitions

A. Aorta--Main trunk of the arterial system; largest artery

B. Arteriole--Very small artery

C. Artery--Blood vessel that carries blood from the heart

(NOTE: These vessels have three muscular walls and carry blood from the pumping chambers of the heart to the organs.)

D. Atrium--Upper chamber or compartment of heart; consists of two chambers, one on each side

E. A-V node--Mass of specialized muscle fibers located in the septum at the junction of the four chambers; responsible for conducting impulses to the conduction fibers of the heart

F. Capillary--Carries blood from arterioles to venules

(NOTE: These tubes are made up of endothelial cells that carry materials necessary to cell life into tissues and carry waste products from the cells.)

G. Cardiac--Pertaining to the heart

H. Cardiology--Study of the heart

(NOTE: *Cardio* refers to the heart.)

I. Conduction system--Combined nerve and muscle tissue which regulate the order in which heart contractions occur

J. Coronary--Pertaining to blood vessels which supply the heart walls

K. Diastole--Period during which heart rests between contractions

L. Endocardium--Smooth layer of cells that lines inside of heart and forms valves

M. Lymph nodes--Small bundles of special lymphoid tissue

(NOTE: Also called *lymph glands*.)

N. Lymphatic system--Network of lymph capillaries that collects excess tissue fluid and certain waste products from the body cells (Transparency 4)

(NOTE: Lymph resembles plasma but contains less protein.)

INFORMATION SHEET

O. Myocardium--Middle layer of heart muscles; also thickest layer

P. Pericardium--Double membrane that covers the heart and secretes fluid, which provides lubrication, preventing friction during heart action

Q. Portal circulation--Includes veins from the stomach, intestine, spleen, and pancreas that empty into the portal vein

R. S-A node--Pacemaker; small mass of specialized muscle fibers in the walls of the right atrium which usually establishes the rhythm of cardiac contractions

S. Septum--Wall in the middle of heart that divides it into right and left sides

T. Systole--Period during which heart contracts

U. Valve--Membranous fold in passageway of heart that prevents the return of the blood passing through it

(NOTE: Valves are located at the entrance and exit of each ventricle to keep the blood from returning and to keep the blood flowing in the right direction.)

Examples: Tricuspid, pulmonary semilunar, bicuspid, aortic semilunar valves

V. Vein--Blood vessel that carries blood to the heart

(NOTE: Veins are less muscular vessels than arteries and are equipped with one-way valves that permit blood to flow only in one direction.)

W. Ventricle--Lower pumping chamber of heart; consists of two chambers, one on each side

X. Venule--Very small vein

II. Functions of the circulatory system

A. Transportation of nutrients and oxygen to body cells

B. Transportation of waste products to excretory organs

C. Distribution of hormones and antibodies

D. Assistance in control of body temperature

E. Maintenance of stable chemical balance between cell and its environment

INFORMATION SHEET

III. Structures of the heart (Transparency 1)

- A. Layers of the heart wall
  - 1. Endocardium
  - 2. Myocardium
  - 3. Pericardium
- B. Chambers
  - 1. Right atrium
  - 2. Right ventricle
  - 3. Left atrium
  - 4. Left ventricle
- C. Valves
  - 1. Tricuspid
  - 2. Pulmonary semilunar
  - 3. Aortic semilunar
  - 4. Bicuspid or mitral
- D. Blood vessels
  - 1. Veins
    - a. Superior vena cava
    - b. Inferior vena cava
    - c. Right pulmonary veins
    - d. Left pulmonary veins
  - 2. Arteries
    - a. Aorta
    - b. Right subclavian artery
    - c. Left subclavian artery
    - d. Right carotid artery
    - e. Left carotid artery
    - f. Pulmonary artery

INFORMATION SHEET

IV. Major arteries and veins (Transparencies 2 and 3)

- A. Veins
    1. Jugular
    2. Subclavian
    3. Axillary
    4. Vena cava--Superior and inferior
    5. Brachial
    6. Renal
    7. Iliac
    8. Radial
    9. Ulnar
    10. Femoral
    11. Saphenous
    12. Popliteal
    13. Tibial
- B. Arteries
    1. Aorta
    2. Carotid
    3. Subclavian
    4. Axillary
    5. Brachial
    6. Mesenteric
    7. Renal
    8. Radial
    9. Ulnar

INFORMATION SHEET

        10. Iliac
        11. Femoral
        12. Popliteal
        13. Tibial
        14. Dorsalis pedis

V. Major blood vessels of the head

    A. Arteries

        1. Carotid
        2. Temporal
        3. Facial
        4. Occipital
        5. Cerebral

    B. Veins

        1. Facial
        2. Temporal
        3. Occipital
        4. Cerebral

VI. Ways to help prevent heart and circulatory ailments

    A. Proper nutrition to maintain desirable weight for age and height

    (NOTE: Obesity does not directly cause heart disease, but it does put strain on the heart. Also, certain food elements are essential for blood formation and clotting of the blood.)

    B. Regular exercise

    (NOTE: Exercise aids circulation, but sudden bursts of strenuous activity may damage the heart.)

    C. Avoidance of sudden extremes in temperature

    (NOTE: Cold especially may affect the blood vessels and precipitate a heart attack.)

INFORMATION SHEET

D. Temperate habits in use of alcohol and tobacco

(NOTE: Both have a damaging effect on the heart and blood vessels.)

E. Regular physical evaluation

(NOTE: Periodic physical examinations of children aid in early detection of heart disease and detect any abnormal conditions in the adult.)

F. Prevention and care of infections

(NOTE: There is a definite relationship between streptococcal infections of the throat and heart disease.)

G. Adequate rest

(NOTE: Rest aids heart and body in renewing itself.)

H. Maintenance of good posture

(NOTE: Good posture gives heart and lungs sufficient area in which to function.)

I. Avoidance of long periods of sitting with legs crossed

(NOTE: This interferes with return of flow of blood from lower extremities.)

J. Avoidance of wearing apparel which interferes with circulation

Example: Knee-high hose with tight elastic

VII. Common diseases, disorders, and procedures related to the circulatory system

A. Murmurs--Abnormal heart sounds due to faulty action of the valves

B. Myocarditis--Inflammation of the heart muscle

C. Pericarditis--Inflammation of the serous membrane on the heart surface

D. Endocarditis--Inflammation of the lining of the heart cavities

E. Ischemic heart disease--Deficiency of blood supply to the heart muscle, predisposing individual to coronary heart disease or degenerative heart disease

F. Hypertension--Elevated blood pressure

G. Angina pectoris--Condition caused by blood being cut off from the heart muscle, resulting in extreme pain in region of heart and left arm and shoulder

INFORMATION SHEET

H. Electrocardiogram--Graphic tracing of electrical current produced by contraction of heart muscle

I. Cardiac catheterization--Fluoroscoping of major vessels and the heart itself by introducing a catheter through appropriate vessels and injecting dye that may be seen as it moves through system

J. Artificial pacemaker--Electrical device that is used to replace defective heart cells; may be external or internal

K. Arrhythmia--Abnormalities of the heart rate and irregularities of rhythm

L. Tachycardia--Accelerated heartbeat

M. Bradycardia--Abnormal slowness of heartbeat

N. Cardiac arrest--Sudden, unexpected stopping of the heartbeat

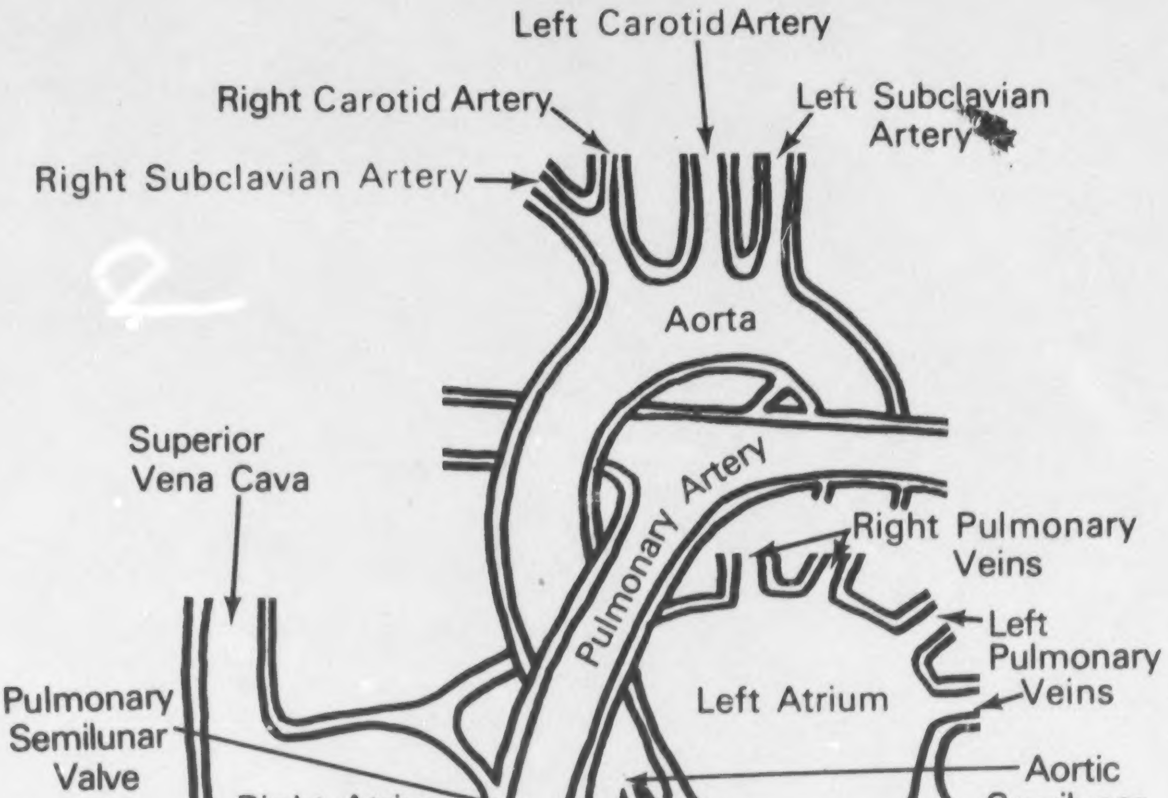
O. Arteriosclerosis-Hardening and thickening of the coats of the arteries

P. Atherosclerosis--Condition that causes fats to accumulate in blood vessels causing loss of circulation

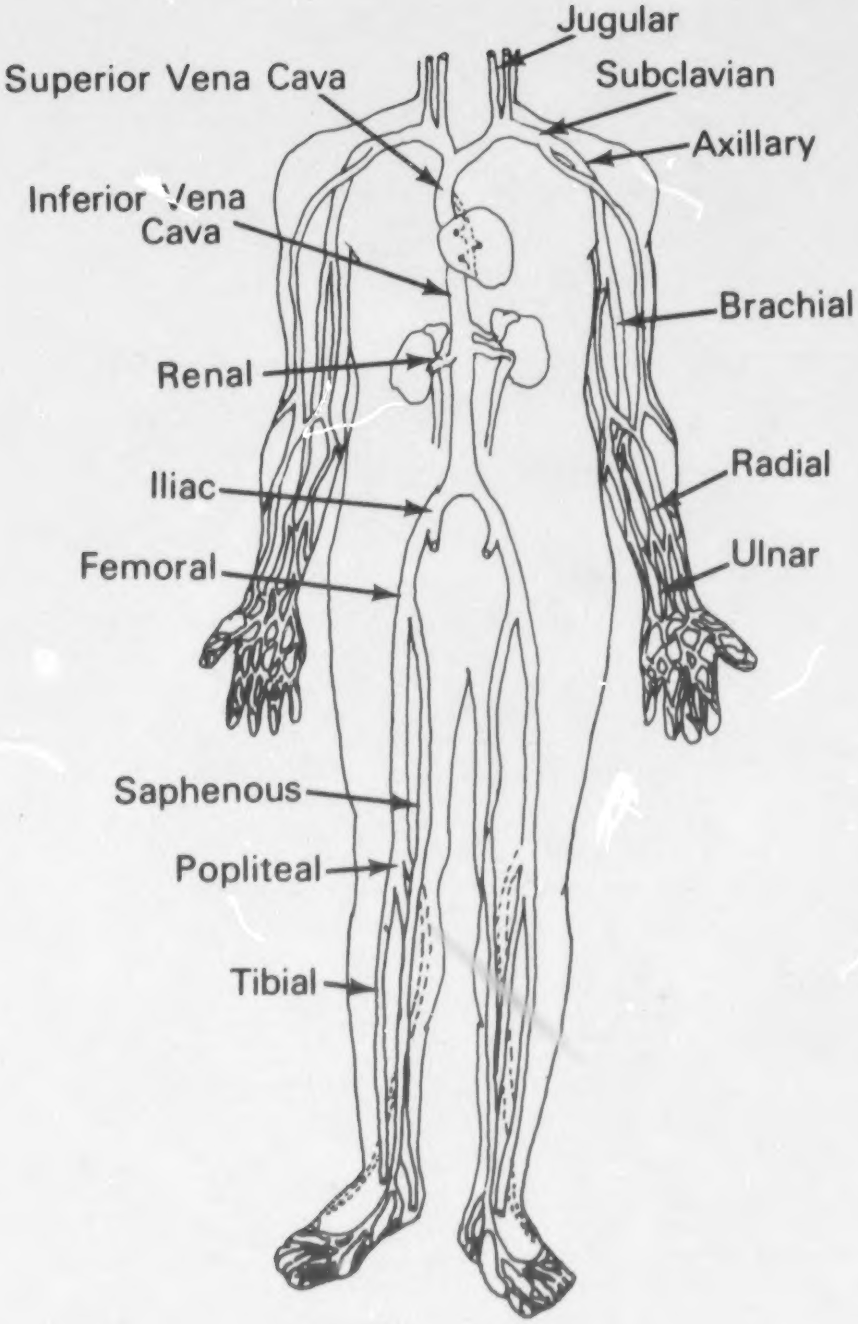
Q. Myocardial infarction--Condition in which myocardial tissue of heart is destroyed due to lack of blood supply to vessels because of a clot or other obstruction

R. Congenital heart diseases--Various conditions resulting from defective development of the heart

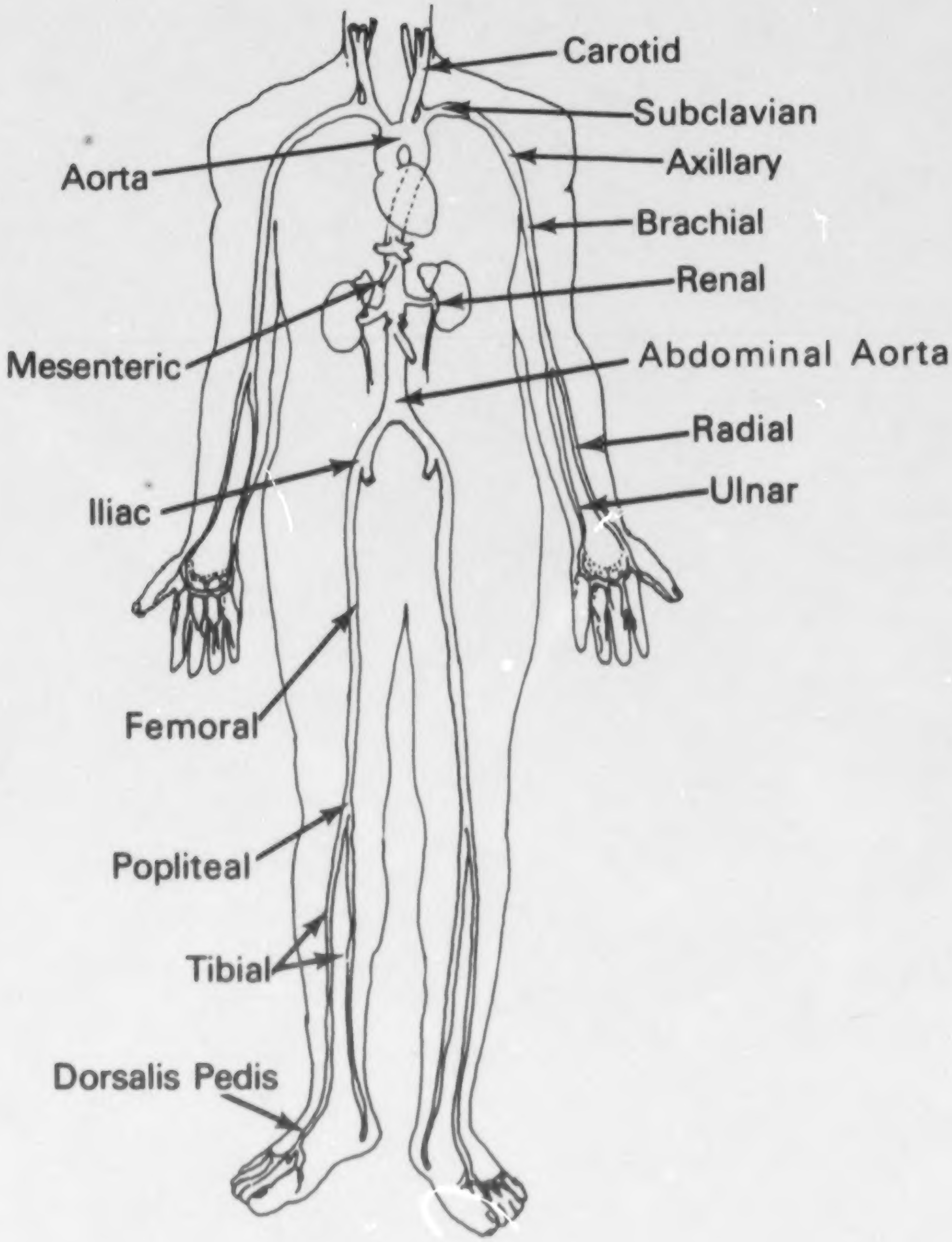
Structure of the Heart


Left Carotid Artery
Right Carotid Artery
Left Subclavian Artery
Right Subclavian Artery
Aorta
Superior Vena Cava
Pulmonary Artery
Right Pulmonary Veins
Left Pulmonary Veins
Left Atrium
Pulmonary Semilunar Valve
Aortic Semilunar Valve
Right Atrium
Tricuspid Valve
Right Ventricle
Left Ventricle
Bicuspid or Mitral Valve
Inferior Vena Cava
Endocardium
Myocardium
Pericardium

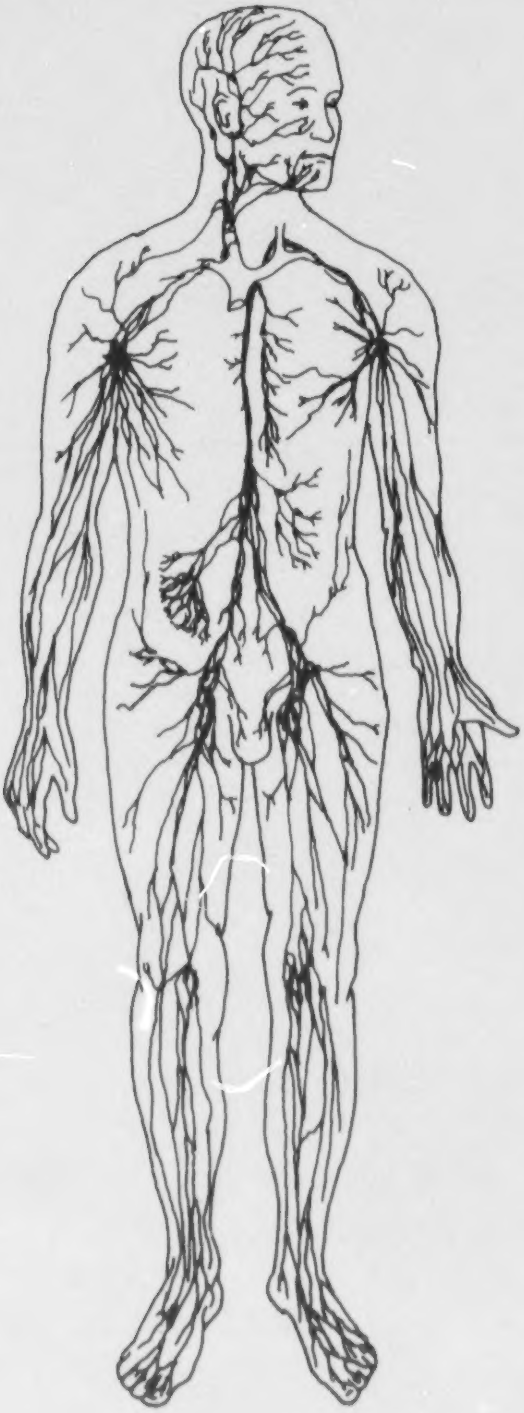
Principal Veins


Jugular
Superior Vena Cava
Subclavian
Axillary
Inferior Vena Cava
Brachial
Renal
Radial
Iliac
Ulnar
Femoral
Saphenous
Popliteal
Tibial

Principal Arteries


Carotid
Subclavian
Aorta
Axillary
Brachial
Renal
Mesenteric
Abdominal Aorta
Radial
Iliac
Ulnar
Femoral
Popliteal
Tibial
Dorsalis Pedis

The Lymphatic Structures



CIRCULATORY SYSTEM
UNIT XII

JOB SHEET #1--APPLY ELECTRODES, LEADS, AND RUN AN EKG

I. Equipment

A. Electrodes (Figures 1 and 2)

(NOTE: The type of electrode will depend on the type of machine used in your office.)

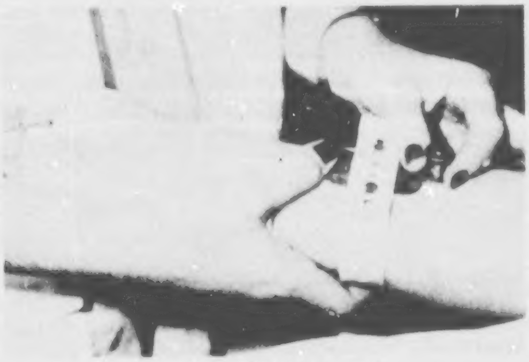


FIGURE 1

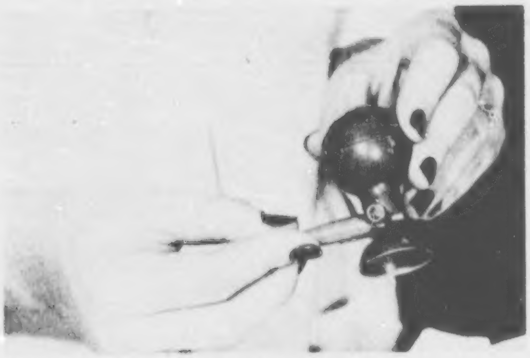


FIGURE 2

B. Electrode cream or jelly

(NOTE: Some machines use prepackaged moistened pads that do not require any extra lubricant. Please check to make sure you are using the appropriate substance.)

C. Razor and shaving cream

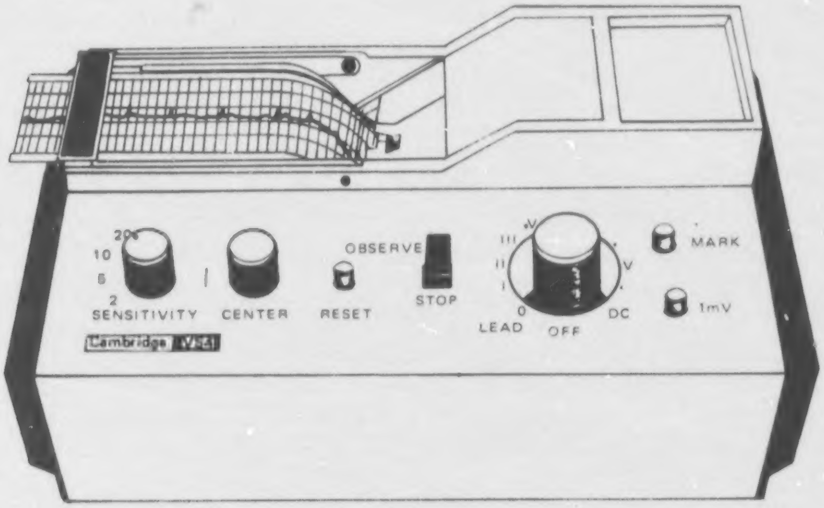
(NOTE: When patient has a large quantity of hair over body, it might be best to shave those areas before applying electrodes. Use your own judgment.)

JOB SHEET #1

D. EKG machine and leads (Figures 3 and 4)

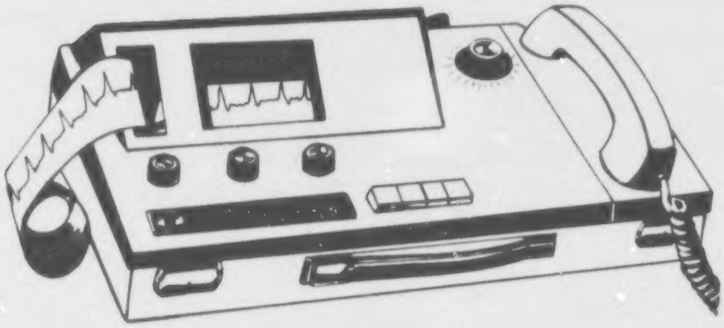
(NOTE: There are various types of machines available. Use manufacturer's instructions for hooking up leads to machine.)

FIGURE 3


20
10
5
2
SENSITIVITY
CENTER
OBSERVE
RESET
STOP
III
aV
II
I
0
LEAD
OFF
V
DC
MARK
1mV
Cambridge

Used with permission of Cambridge Instrument Company.

FIGURE 4



Used with permission of Computer Instruments Corporation, Hempstead, New York 11550.

JOB SHEET #1

II. Procedure

A. Wash hands

B. Identify patient by name and explain procedure

C. Instruct patient to lie down on the exam table

(NOTE: The patient will need to remain quiet and room will need to be free from disturbances.)

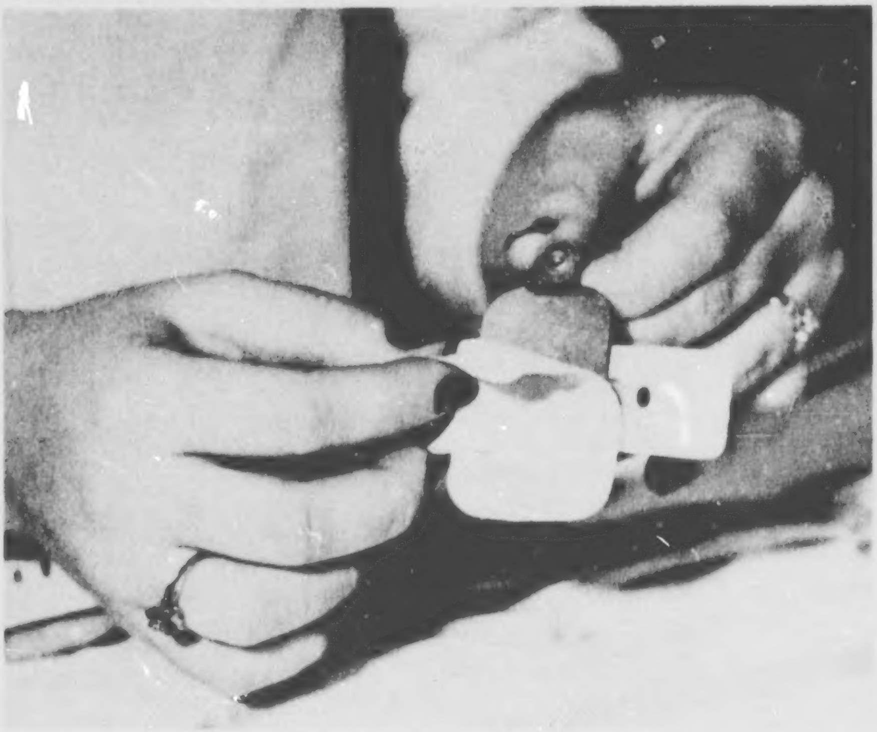
D. Instruct patient to disrobe to waist; cover with a top sheet or drape

E. Expose patient's forearms and lower portion of the legs for the limb leads

F. Shave areas of arms, legs, and chest if necessary

G. Remove pre-moistened pad from package and place directly on electrode (Figure 5)

FIGURE 5



(NOTE: If pre-moistened pads are used, follow directions on packet.)

JOB SHEET #1

H. Apply electrode over the pad and fasten the strap in place over the forearm (Figure 6)

(NOTE: The strap needs to be secure but should not shut off circulation.)

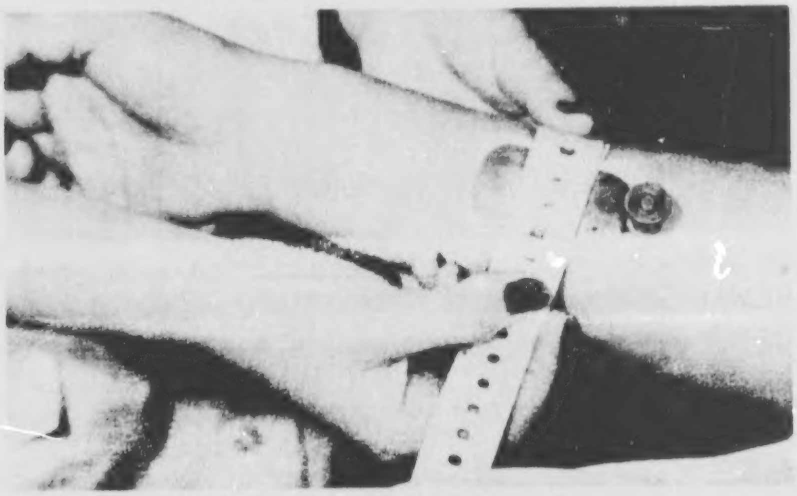


FIGURE 6

I. Fasten electrode on other forearm in the same manner

J. Place leg electrodes on the inside fleshy part of calf (Figure 7)

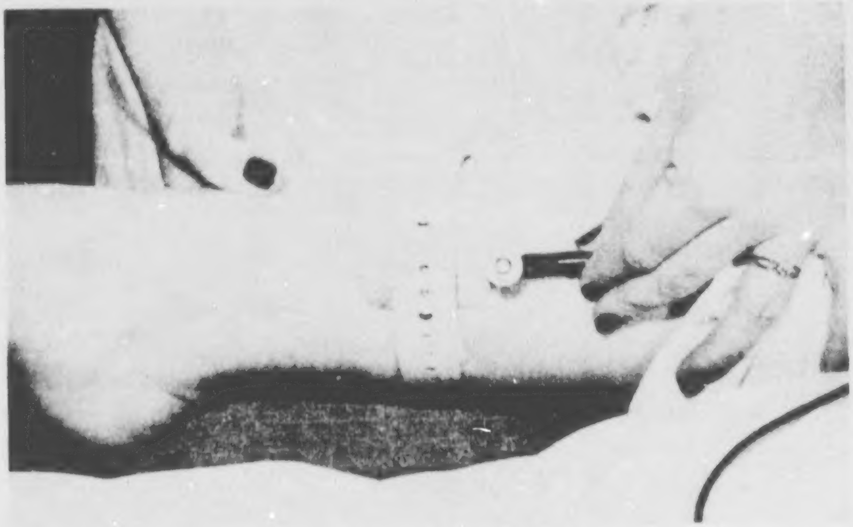


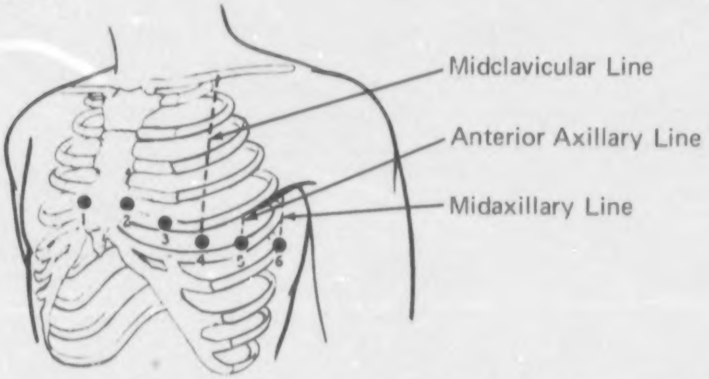
FIGURE 7

JOB SHEET #1

K. Attach remaining electrodes (Figure 8)

(NOTE: If the leads on the machine are color coded to correspond with electrodes, make sure that you have the right lead in each area.)

FIGURE 8



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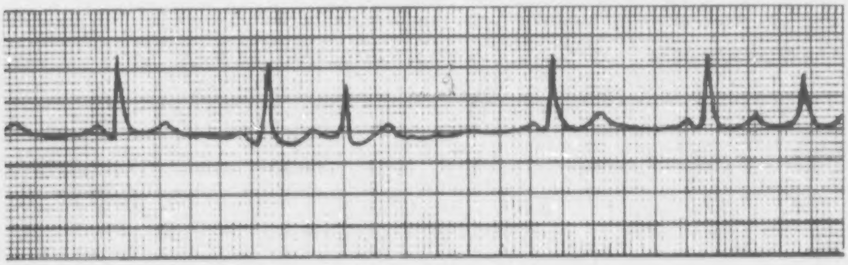
L. Make sure before you begin running strips that the machine is sufficiently warmed up, approximately 2-3 minutes

M. Start the machine and run a sample strip to see that good contact has been made; be sure to establish standardization throughout procedure according to manufacturer's instruction

(NOTE: Strip should appear clear and have a good strong baseline. See Figure 9.)

FIGURE 9



N Mount strips or follow directions of physician as to how the strips will be prepared for reading.

MA - 507-B

CIRCULATORY SYSTEM
UNIT XII

TEST

NAME________________________________ SCORE______________

1. Match terms associated with the circulatory system to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Period during which heart contracts

_____b. Very small artery

_____c. Middle layer of heart muscles; also thickest layer

_____d. Pertaining to the heart

_____e. Wall in the middle of heart that divides it into right and left sides

_____f. Very small vein

_____g. Upper chamber or compartment of heart; consists of two chambers, one on each side

_____h. Study of the heart

_____i. Blood vessel that carries blood to the heart

_____j. Main trunk of the arterial system; largest artery

_____k. Period during which heart rests between contractions

_____l. Pacemaker; small mass of specialized muscle fibers in the walls of the right atrium which usually establishes the rhythm of cardiac contractions

_____m. Smooth layer of cells that lines inside of heart and forms valves

_____n. Pertaining to blood vessels which supply the heart walls

_____o. Network of lymph capillaries that collects excessive tissue fluid and certain waste products from body cells

1. Cardiac
2. Cardiology
3. Myocardium
4. Atrium
5. Vein
6. Venule
7. Arteriole
8. Aorta
9. S-A node
10. Septum
11. Systole
12. Diastole
13. Endocardium
14. Coronary
15. Lymphatic system

_____p. Combined nerve and muscle tissue which regulate the order in which heart contractions occur

_____q. Double membrane that covers the heart and secretes fluid, which provides lubrication, preventing friction during heart action

_____r. Lower pumping chamber of heart; consists of two chambers, one on each side

_____s. Carries blood from arterioles to venules

_____t. Membranous fold in passageway of heart that prevents the return of the blood passing through it

_____u. Small bundles of special lymphoid tissue

_____v. Includes veins from stomach, intestine, spleen, and pancreas that empty into the portal vein

_____w. Mass of specialized muscle fibers located in the septum at the junction of the four chambers; responsible for conducting impulses to the conduction fibers of the heart

_____x. Blood vessel that carries blood from the heart

16. Conduction system
17. Portal circulation
18. Ventricle
19. Valve
20. Pericardium
21. Capillary
22. Lymph nodes
23. A-V node
24. Artery

2. Select from the following list functions of the circulatory system. Mark each correct statement with an "X."

_____a. Transportation of nerve impulses

_____b. Assistance in control of body temperature

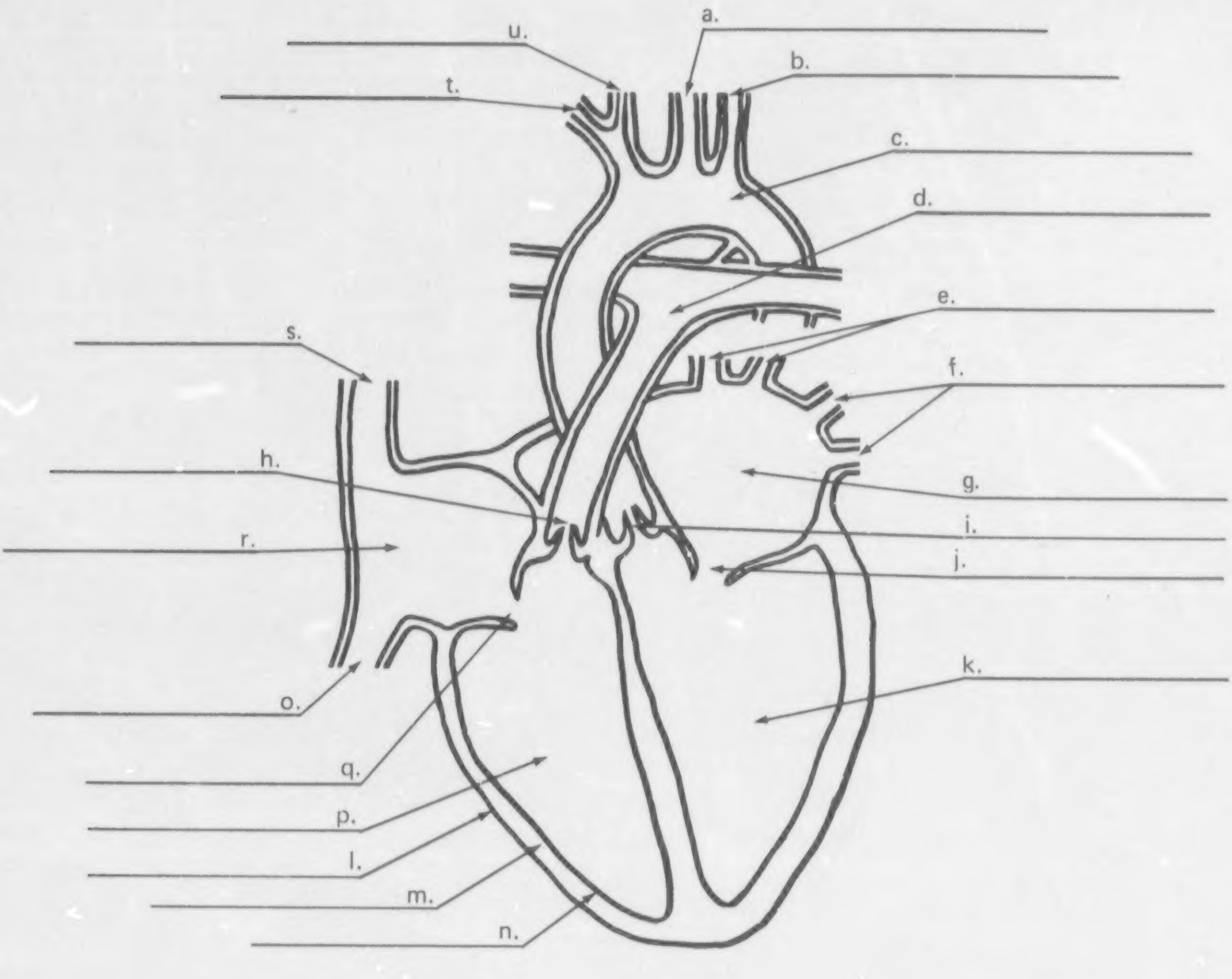
_____c. Transportation of nutrients and oxygen to body cells

_____d. Transportation of waste products from endocrine organs

_____e. Distribution of hormones and antibodies

_____f. Maintenance of stable chemical balance between cell and its environment

3. Identify structures of the heart shown in the drawing below. Write the correct names in the blanks provided.

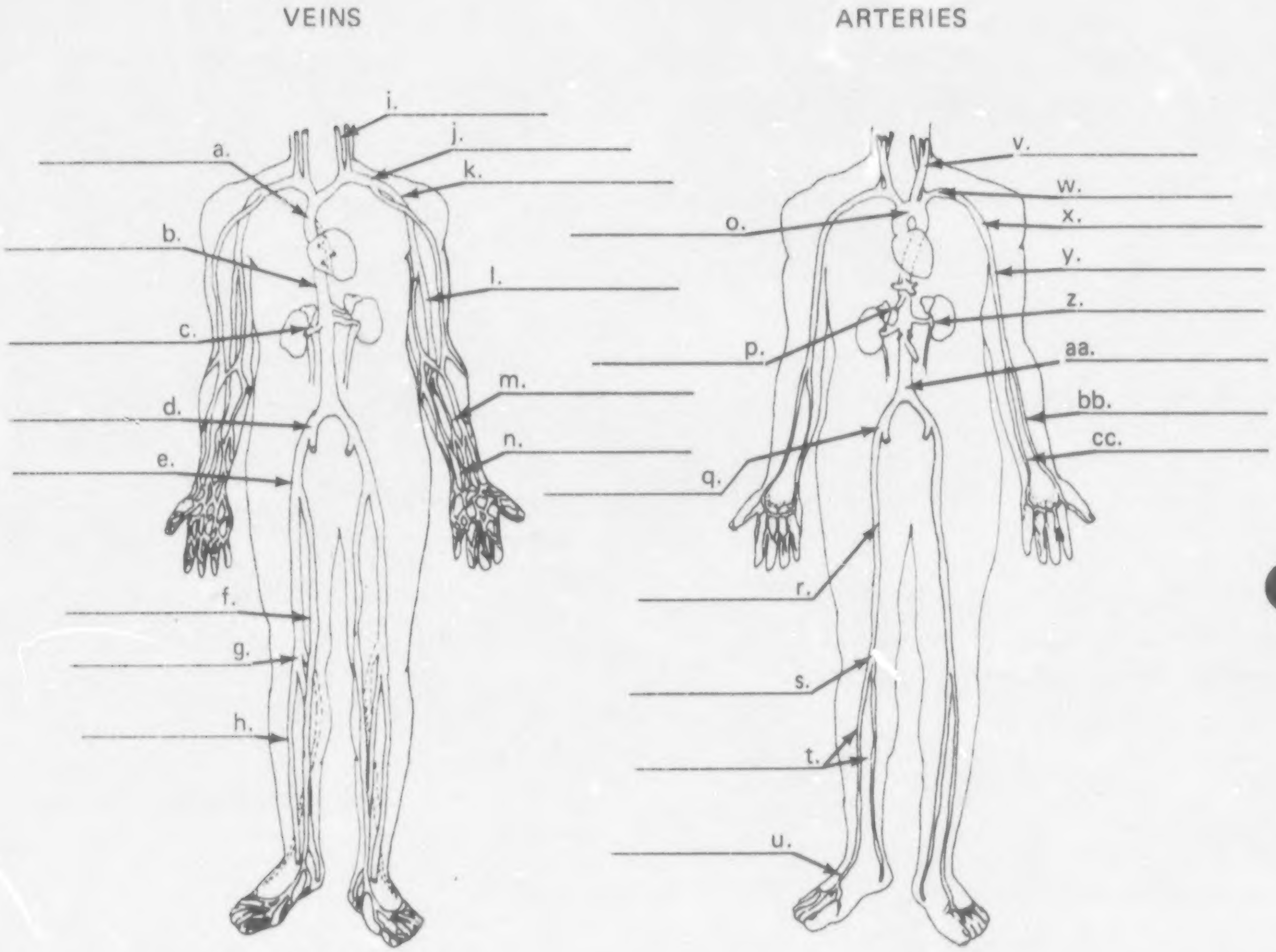


Pulmonary artery
Left ventricle
Right atrium
Left pulmonary veins
Inferior vena cava
Right subclavian artery
Right pulmonary veins
Left atrium

Aorta
Endocardium
Left carotid artery
Myocardium
Tricuspid valve
Bicuspid or mitral valve
Right ventricle
Pericardium

Pulmonary semilunar valve
Aortic semilunar
Right carotid artery
Left subclavian artery
Superior vena cava

4. Identify major arteries and veins on the drawings below. Write the correct names in the blanks provided.


VEINS
ARTERIES
a.
b.
c.
d.
e.
f.
g.
h.
i.
j.
k.
l.
m.
n.
o.
p.
q.
r.
s.
t.
u.
v.
w.
x.
y.
z.
aa.
bb.
cc.

Brachial
Popliteal
Saphenous
Tibial
Inferior vena cava
Iliac
Superior vena cava
Femoral
Renal
Ulnar

Axillary
Jugular
Radial
Subclavian
Radial
Ulnar
Iliac
Popliteal
Aorta
Axillary

Abdominal aorta
Dorsalis pedis
Tibial
Mesenteric
Renal
Abdominal aorta
Carotid
Subclavian
Brachial

5. Name major blood vessels of the head.

Arteries	Veins
a. ____________	a. ____________
b. ____________	b. ____________
c. ____________	c. ____________
d. ____________	d. ____________
e. ____________	

6. State five ways to help prevent heart and circulatory ailments.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

7. Match common diseases, disorders, and procedures related to the circulatory system to the correct definitions. Place the correct numbers in the blanks provided.

______a. Abnormal heart sounds due to faulty action of the valves

______b. Fluoroscoping of major vessels and the heart itself by introducing a catheter through appropriate vessels and injecting dye that may be seen as it moves through system

______c. Abnormal slowness of heartbeat

______d. Various conditions resulting from defective development of the heart

______e. Elevated blood pressure

______f. Accelerated heartbeat

______g. Inflammation of the lining of the heart cavities

______h. Inflammation of the heart muscle

______i. Hardening and thickening of the coats of the arteries

1. Congenital heart disease
2. Endocarditis
3. Myocarditis
4. Hypertension
5. Bradycardia
6. Tachycardia
7. Murmurs
8. Cardiac catheterization
9. Arteriosclerosis

_____j. Condition in which myocardial tissue of heart is destroyed due to lack of blood supply to the vessels because of a clot or other obstruction

_____k. Deficiency of blood supply to the heart muscle, predisposing individual to coronary heart disease or degenerative heart disease

_____l. Abnormalities of the heart rate and irregularities of rhythm

_____m. Condition caused by blood being cut off from the heart muscle, resulting in extreme pain in region of heart and left arm and shoulder

_____n. Sudden, unexpected stopping of the heartbeat

_____o. Inflammation of the serous membrane on the heart surface

_____p. Graphic tracing of electrical current produced by contraction of heart muscle

_____q. Electrical device that is used to replace defective heart cells; may be external or internal

_____r. Condition that causes fats to accumulate in blood vessels causing loss of circulation

10. Angina pectoris
11. Cardiac arrest
12. Ischemic heart disease
13. Myocardial infarction
14. Pericarditis
15. Electrocardiogram
16. Arrhythmia
17. Atherosclerosis
18. Artificial pacemaker

8. Demonstrate the ability to apply electrodes, leads, and run an EKG.

(NOTE: If this activity has not been finished before the test, ask the instructor when it should be completed.)

CIRCULATORY SYSTEM
UNIT XII

ANSWERS TO TEST

1. a. 11
   b. 7
   c. 3
   d. 1
   e. 10
   f. 6
   g. 4
   h. 2
   i. 5
   j. 8
   k. 12
   l. 9
   m. 13
   n. 14
   o. 15
   p. 16
   q. 20
   r. 18
   s. 21
   t. 19
   u. 22
   v. 17
   w. 23
   x. 24
2. b, c, e, f
3. a. Left carotid artery
   b. Left subclavian artery
   c. Aorta
   d. Pulmonary artery
   e. Right pulmonary veins
   f. Left pulmonary veins
   g. Left atrium
   h. Pulmonary semilunar valve
   i. Aortic semilunar valve
   j. Bicuspid or mitral valve
   k. Left ventricle
   l. Pericardium
   m. Myocardium
   n. Endocardium
   o. Inferior vena cava
   p. Right ventricle
   q. Tricuspid valve
   r. Right atrium
   s. Superior vena cava
   t. Right subclavian artery
   u. Right carotid artery
4. Veins
   a. Superior vena cava
   b. Inferior vena cava
   c. Renal
   d. Iliac

e. Femoral

f. Saphenous

g. Popliteal

h. Tibial

i. Jugular

j. Subclavian

k. Axillary

l. Brachial

m. Radial

n. Ulnar

Arteries

o. Aorta

p. Mesenteric

q. Iliac

r. Femoral

s. Popliteal

t. Tibial

u. Dorsalis pedis

v. Carotid

w. Subclavian

x. Axillary

y. Brachial

z. Renal

aa. Abdominal aorta

bb. Radial

cc. Ulnar

5. Arteries
   - a. Carotid
   - b. Temporal
   - c. Facial
   - d. Occipital
   - e. Cerebral

   Veins
   - a. Facial
   - b. Temporal
   - c. Occipital
   - d. Cerebral

6. Any five of the following:
   - a. Proper nutrition to maintain desirable weight for age and height
   - b. Regular exercise
   - c. Avoidance of sudden extremes in temperature
   - d. Temperate habits of use of alcohol and tobacco
   - e. Regular physical evaluation
   - f. Prevention and care of infections
   - g. Adequate rest
   - h. Maintenance of good posture
   - i. Avoidance of long periods of sitting with legs crossed
   - j. Avoidance of wearing apparel which interferes with circulation

7. a. 7
   b. 8
   c. 5
   d. 1
   e. 4
   f. 6
   g. 2
   h. 3
   i. 9
   j. 13
   k. 12
   l. 16
   m. 10
   n. 11
   o. 14
   p. 15
   q. 18
   r. 17

8. Performance skills evaluated to the satisfaction of the instructor

HEMATOLOGY
UNIT XIII

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of hematology to assist the physician in diagnostic tests, treatment of problems and in patient education. The student should also be able to perform finger stick for capillary blood tests and perform a venipuncture for venous blood tests. This knowledge will be evidenced through completion of job sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with hematology to the correct definitions.
2. State the general functions of blood.
3. Select from a list principal components of blood plasma.
4. Distinguish between characteristics of normal blood cells.
5. Select from a list reasons for blood transfusions.
6. Name tne four blood groups.
7. Discuss the Rh factor.
8. Match routine blood studies to the correct descriptions.
9. Name less common blood tests done for more specific diagnoses.
10. Match normal ranges of blood tests in adults to the correct values.
11. Demonstrate the ability to:
    a. Perform finger stick for capillary blood tests.
    b. Perform venipuncture for venous blood tests.

HEMATOLOGY
UNIT XIII

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information and job sheets.

  C. Make transparencies.

  D. Discuss unit and specific objectives.

  E. Discuss information and job sheets.

  F. Invite laboratory technicians to speak to class on specific diagnostic tests and equipment used, or take a field trip to the laboratory.

  G. Obtain a microscope and blood specimen slides from a laboratory, science class, or other health program to compare different cell structures.

  H. Provide equipment to demonstrate and discuss procedures outlined in job sheets.

  I. Allow time for return demonstration.

  J. Give test.

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Transparency masters

    1. TM 1--Erythrocytes

    2. TM 2--White Blood Cells

    3. TM 3--Ameboid Action of Leukocytes

    4. TM 4--Maternal Sensitization to Rh Factor

  D. Job sheets

    1. Job Sheet #1--Perform Finger Stick for Capillary Blood Tests

    2. Job Sheet #2--Perform Venipuncture for Venous Blood Tests

  E. Test

  F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Memmler, Ruth, and Wood, Dena Lin. *The Human Body in Health and Disease*. Philadelphia: J.B. Lippincott Company, 1977.

C. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

D. Clayton, Thomas L., M.D. ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F. A. Davis Company, 1977.

IV. Additional materials:

A. Films--"The Blood." Available from Oklahoma State Department of Health, 10th and Stonewall, Oklahoma City, Oklahoma 73104.

B. Filmstrips

1. "The Bleeding Diseases." Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.
2. "From Generation to Generation." March of Dimes, National Foundation, 1275 Mamaroneck Ave., White Plains, New York 10605.

HEMATOLOGY
UNIT XIII

INFORMATION SHEET

I. Terms and definitions

- A. Anemia--Deficiency of red blood cells or hemoglobin, or both
- B. Aneurysm--Sac formed by dilation of walls in an artery or vein until wall is weakened and filled with blood
- C. Anticoagulant--Agent which prevents or delays formation of blood

  Example: Heparin, an acid manufactured by the liver
- D. Bone marrow puncture--Insertion of a hollow needle into marrow cavity of a flat bone to withdraw a sample of marrow

  (NOTE: This test is usually performed on upper sternum or the iliac crest.)
- E. Coagulation--Clotting of blood
- F. Corpuscles--Blood cells
- G. Embolus--Thrombus which has moved from the site where it was formed
- H. Erythrocytes--Red blood cells
- I. Gamma globulin--Antibody fraction of blood
- J. Granulocytes--White blood cells having a lobed nucleus and granules in the cytoplasm
- K. Hematocrit--Percentage of volume of erythrocytes in whole blood
- L. Hematology--Study of the blood

  (NOTE: *Hema* refers to blood.)
- M. Hemoglobin--Oxygen-carrying protein pigment of red blood cells
- N. Hemophilia--Disorder seen predominantly in males that causes hemorrhagic bleeding
- O. Hemorrhage--Abnormal discharge of blood either externally or internally
- P. Homeostasis--State of chemical balance between a cell and its environment
- Q. Hodgkin's disease--Condition of unknown cause that begins in the lymphatic system and involves lymph nodes with large tumor cells

INFORMATION SHEET

R. Leukemia--Disease caused by overgrowth of white blood cells; usually terminal

S. Leukocytes--White blood cells

T. Lipid--Any group of fat or fatlike substances which are insoluble in water

U. Phagocytosis--Ingestion and digestion of bacteria and other cells by various white blood cells

V. Phlebitis--Inflammation of walls of veins

W. Plasma--Liquid portion of blood

X. Shock--Depression of the body functions due to failure of circulation

(NOTE: Shock may be caused from various conditions such as infection, drug reaction, hemorrhage, trauma, or dehydration.)

Y. Sickle cell disease--Hereditary, chronic form of anemia caused by an abnormal S-shaped red blood cell

(NOTE: This disease occurs almost exclusive in the black race.)

Z. Thrombus--Clot formed in a blood vessel

AA. Transfusion--Injection of one person's blood into the blood vessels of another person

BB. Varicose veins--Abnormally dilated veins which often become hemorrhagic

II. General functions of bood

A. Transportation

Examples: Oxygen carried from the lungs to the tissues and carbon dioxide from the tissues to the lungs; nutrients carried from the digestive tract to tissues and waste products from tissues to excretory organs; hormones and heat carried to organs and muscles

B. Maintenance of homeostasis

(NOTE: Blood helps maintain acid-base, electrolyte, and fluid balance.)

C. Resistance to infection

(NOTE: Some components of blood fight infection and some help maintain immunity to disease.)

INFORMATION SHEET

III. Principal components of blood plasma

A. Water

(NOTE: Water comprises about 90 percent of blood plasma and acts as carrier for the approximately one hundred other components.)

B. Blood proteins

(NOTE: These comprise about seven percent of blood plasma.)

Examples: Amino acids, antibody fractions, blood clotting proteins, serum albumin

C. Carbohydrates, principally glucose

D. Lipids

E. Mineral salts

(NOTE: These are needed for bone formation, hormone production, production of red cells, and maintenance of acid-base balance.)

F. Waste products

G. Hormones and vitamins

H. Gases (oxygen, nitrogen, and carbon dioxide)

I. Heparin

J. Vitamin K

(NOTE: This aids in clotting.)

IV. Characteristics of normal blood cells (Transparencies 1, 2, and 3)

A. Erythrocytes

(NOTE: These cells are also called RBCs, red blood cells or red corpuscles, and are found in the red bone marrow, spleen, and other lymph tissue.)

1. Transport oxygen to cells and carbon dioxide from cells
2. Are minute, disc-shaped cells that look alike or very similar
3. Have an average life span of 120 days
4. Remain in bloodstream unless a vessel is cut or ruptured

INFORMATION SHEET

B. Leukocytes

(NOTE: These cells are also called WBCs, white blood cells, or white corpuscles and tissue.)

1. Fight infection
2. Are colorless
3. Vary in shape and size
4. Have average life span of nine days
5. May move out of the blood vessels by passing between cells of the vessel walls

C. Platelets

(NOTE: These cells are found in the red bone marrow; they are also called thrombocytes and aid in coagulation of blood.)

1. Are irregular in size and shape
2. Are very fragile and break easily under stress
3. Can be seen in clusters

V. Reasons for blood transfusions

A. To replace blood lost through hemorrhage

B. To treat anemia

C. To treat shock

D. To exchange blood in certain blood disorders

E. To aid recovery as a preoperative or postoperative procedure

VI. Blood groups

(NOTE: In theory, blood can be given according to this table:

Blood type	Can receive blood from	Can give blood to
A	A and O	A and AB
B	B and O	B and AB
AB	All	AB
C	O	All

However, blood is nearly always given to persons from the same blood group and only after cross-matching to minimize adverse reactions.)

INFORMATION SHEET

A. Type O

(NOTE: About 45 percent of all people have type O blood.)

B. Type AB

(NOTE: About four percent of all people have type AB blood.)

C. Type A

(NOTE: About 40 percent of all people have type A blood.)

D. Type B

(NOTE: About ten percent of all people have type B blood.)

VII. Rh factor (Transparency 4)

A. Approximately 85 percent of the world's population have a red blood cell protein called the Rh factor; these people are Rh positive

B. Approximately 15 percent of the world's population do not have this protein; these people are Rh negative

C. When Rh positive blood is given to an Rh negative person, the recipient's Rh negative blood may produce counteracting proteins, called antibodies, which will destroy the red cells from the Rh positive blood; this does not happen when Rh negative blood is given to an Rh positive recipient

D. An Rh negative mother may become sensitized by proteins from an Rh positive baby

(NOTE: The Rh positive factor in the baby would be inherited from the father.)

E. During pregnancies following sensitization, the mother's antibodies may pass into the blood of the unborn infant and cause erythroblastosis fetalis, a destruction of red blood cells

(NOTE: Erythroblastosis fetalis may be fatal; if the infant is born alive, it may need complete blood replacement with Rh negative blood.)

VIII. Routine blood studies

A. Hemoglobin measurement--Measures the amount of pigment which contains iron in the red blood cells

(NOTE: Its function is to carry oxygen from lungs to tissues.)

B. Total red cell count--Measures total volume of red corpuscles (erythrocytes)

INFORMATION SHEET

C. Total white cell count--Measures total volume of white corpuscles

Examples: Leukocytes, lymphocytes, eosinophils, neutrophils, monocytes, and basophils

(NOTE: Differential white count is usually done with the total white count and gives the percentages of each type of white cell.)

D. Serology--Scientific study of serum

(NOTE: This is also a test that can detect syphilis.)

E. Blood chemistry tests--Measure levels of bd components from venous blood sample

Examples: Electrolytes, enzyme levels

IX. Less common blood tests done for more specific diagnoses

A. Platelet count

B. Blood sugar

C. Clotting time and bleeding time

D. Examination of blood for parasites

E. Bone marrow puncture

X. Normal range of blood tests in adults

A. Erythrocytes--4,500,000 to 5,000,000

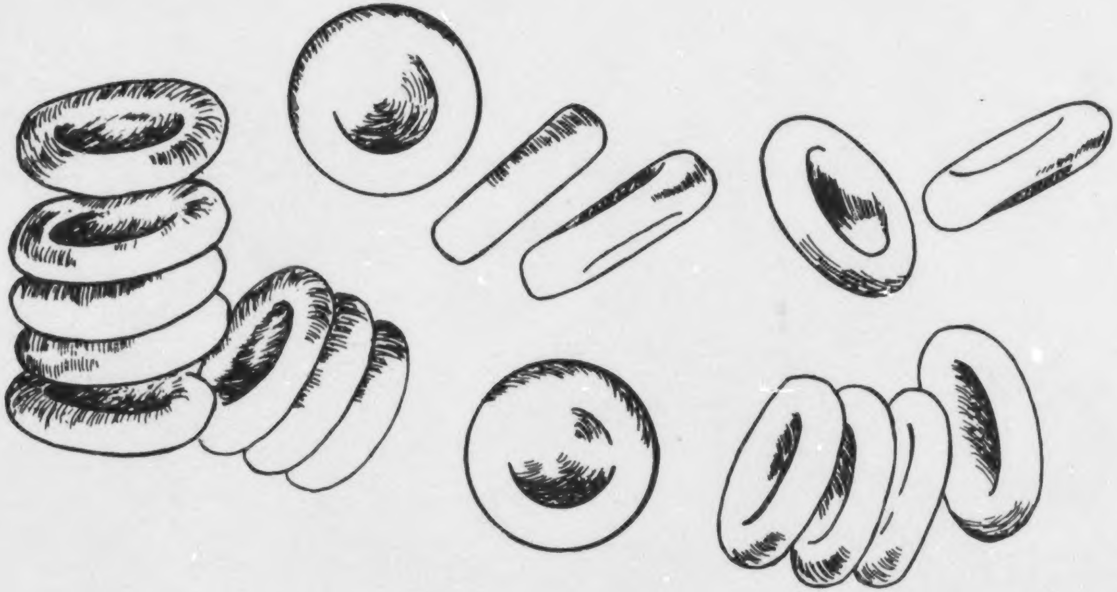
B. Leukocytes--5,000 to 10,000

C. Platelets--200,000 to 400,000

D. Hemoglobin--12-18 gm%

E. Hematocrit--38-50 gm%

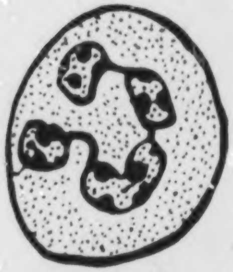
Erythrocytes



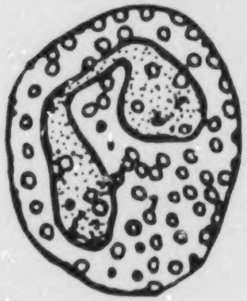
Erythrocytes viewed from various angles.
Note the concave surfaces.

White Blood Cells

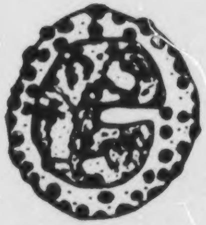
GROUP I-GRANULOCYTES
formed in red bone marrow



Neutrophil



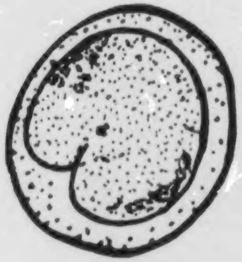
Eosinophil



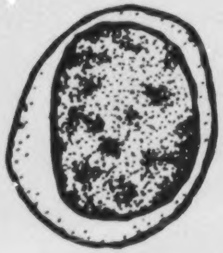
Basophil

Platelets
(Thrombocytes)

GROUP II- AGRANULOCYTES
formed in lymphoid organs

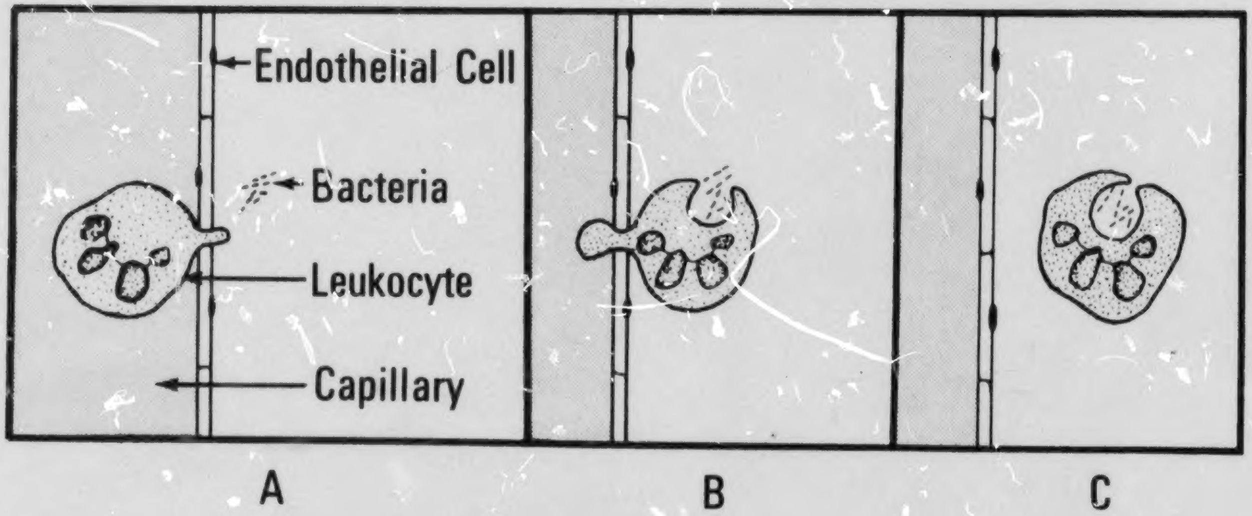


Monocyte



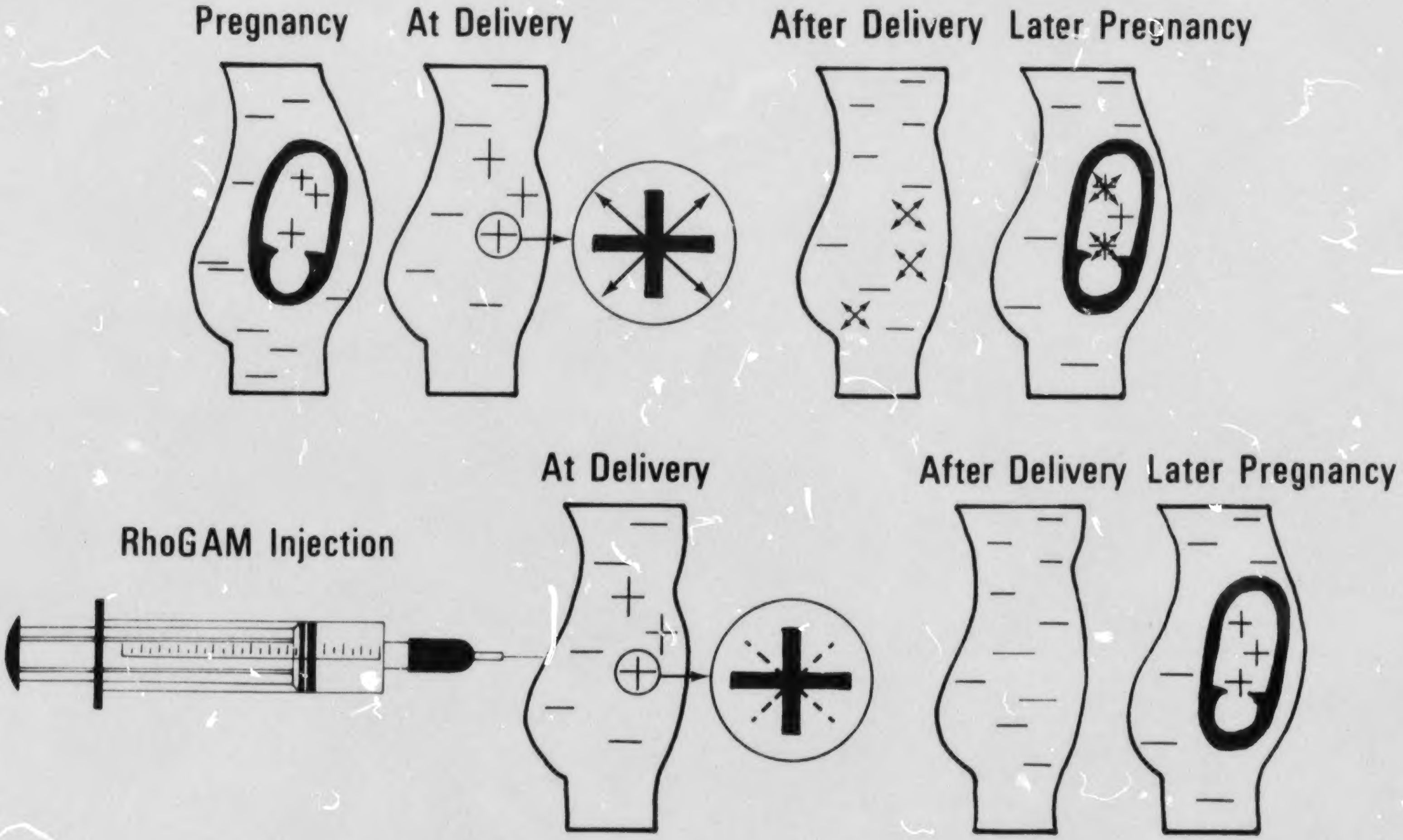
Lymphocyte

Ameboid Action of Leukocytes


Endothelial Cell
Bacteria
Leukocyte
Capillary
A
B
C

(A) A white blood cell squeezing itself through a capillary wall, in the region of an infection. (B) and (C) The white cell engulfing the bacteria, part of the body's process of fighting infection.

Maternal Sensitization to Rh Factor


Pregnancy
At Delivery
After Delivery
Later Pregnancy
RhoGAM Injection
At Delivery
After Delivery
Later Pregnancy

Given after delivery of each Rh positive infant or miscarriage.

HEMATOLOGY
UNIT XIII

JOB SHEET #1--PERFORM FINGER STICK FOR CAPILLARY BLOOD TESTS

(NOTE: Capillary blood is used for various tests done in the medical office, such as routine blood counts and microhematocrits.)

I. Equipment

   A. Isopropyl alcohol

   B. Cotton sponges or balls

   C. Sterile puncture instrument (Figure 1)

   (NOTE: There are various types of equipment manufactured for this purpose. Become familiar with the type used in your office and follow instructions for use.)

   (CAUTION: Disease and infection can occur if equipment is not sterile. It is best to use individually packed disposable equipment.)

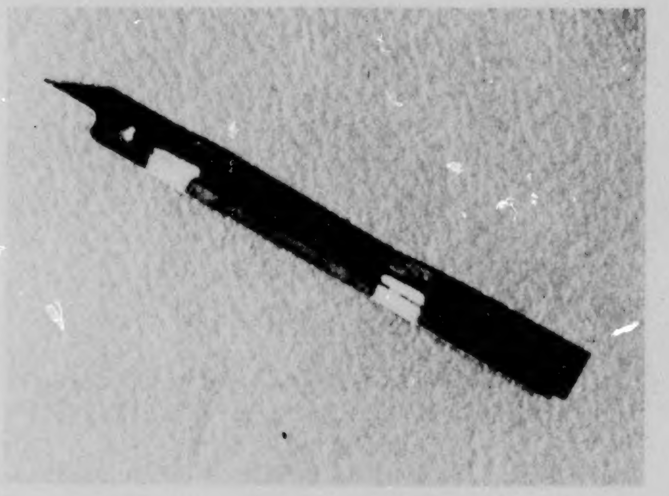


FIGURE 1

   D. Various instruments and materials to use in whatever test is being performed

   Example: Pipets, diluting fluid, stains, slides

JOB SHEET #1

II. Procedure

A. Wash hands

B. Identify patient by name and explain procedure

C. Select finger, usually the second finger

(NOTE: When patient's hands are cold, it is a good idea to warm them to improve circulation.)

D. Apply light pressure to the finger, stroking gently towards the end to improve circulation to the puncture area

E. Clean puncture area thoroughly with an alcohol cotton swab or cotton ball, and allow to dry

(CAUTION: Do not blow on it or allow anything to touch it or contaminate the area.)

F. Use your thumb and forefinger to hold the patient's finger stable; apply pressure just above the first joint, puffing the tissue up on the tip

G. Hold the lancet in your other hand and, with a quick stabbing stroke to the side of the area, puncture the finger to a depth of 3-4 mm

(NOTE: Blood should flow freely if puncture has been performed correctly.)

H. Squeeze with very gentle pressure, just enough to allow flow to continue

I. Wipe away the first drops of blood with a dry cotton sponge or ball

J. Use gentle pressure to produce a drop of blood that is needed for a certain procedure

(NOTE: The procedure to be done will indicate how much blood is needed. Usually a large drop is needed for a white-cell or hemoglobin count, and a smaller drop for a red-cell count.)

K. Wipe finger dry each time blood is taken so that a fresh drop may be used for each type of test

(NOTE: By following this procedure you will prevent coagulated blood from being taken.)

JOB SHEET #1

L. Use whatever devices are needed to collect specimen and carefully label each sample to prevent confusion when doing tests (Figure 2)

Example: Pipets, slides or test tubes

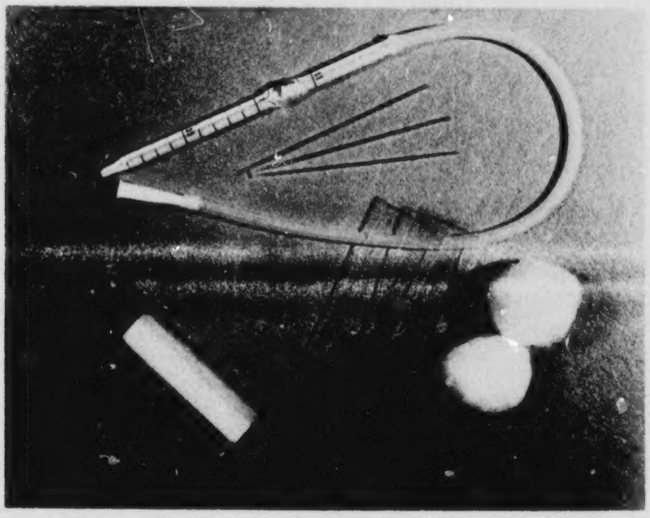


FIGURE 2

M. Cleanse finger and provide patient with a dry cotton ball or adhesive strip if desired

N. Clean work area

O. Take specimens to laboratory or place in safe place if procedure has taken place in lab

P. Perform laboratory tests as ordered or send them to appropriate diagnostic center as indicated

HEMATOLOGY
UNIT XIII

JOB SHEET #2--PERFORM VENIPUNCTURE FOR VENOUS BLOOD TESTS

(NOTE: Venipunctures are done to obtain blood for such tests as sedimentation rates and chemistries, which require more blood to be taken.)

I. Equipment

   A. Isopropyl alcohol

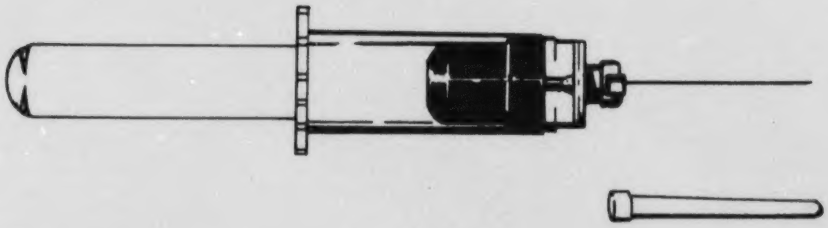
   B. Cotton sponges or balls

   C. Tourniquet

   D. Vacutainer tubes (Figure 1)

   (NOTE: Occasionally, a standard needle and syringe may be used to draw blood. Many medical offices are now using a system that consists of a collecting tube, an adapter, and a needle. The tube contains a vacuum and is closed by a rubber stopper. The adapter is a clear plastic cylinder into which the vacutainer tube slides in at one end and the needle is fastened in the other. This equipment is sterile and disposable, although the adapter may be used again if needed.)

FIGURE 1



Used with permission of Becton Dickinson and Company

II. Procedure

   A. Wash hands

   B. Identify patient by name and explain procedure

JOB SHEET #2

C. Select vein to be used (Figure 2)

(NOTE: Veins most commonly used are those in the antecubital space. If necessary, other veins may be used, but these are usually the easiest to find.)

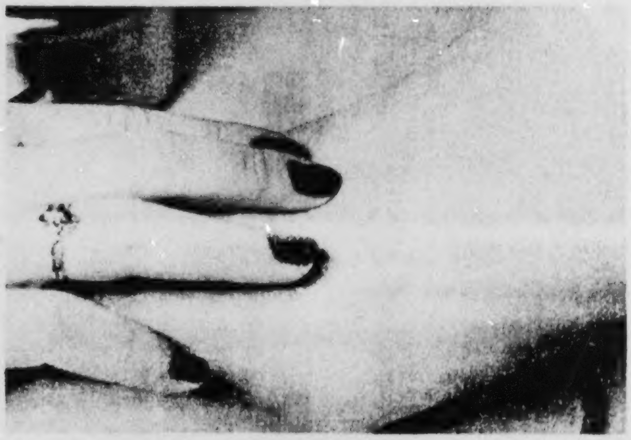


FIGURE 2

D. Apply a temporary tourniquet just above the elbow (Figure 3)

(NOTE: This tourniquet should squeeze the arm, prompting improved blood supply to the puncture area, without shutting off circulation entirely.)

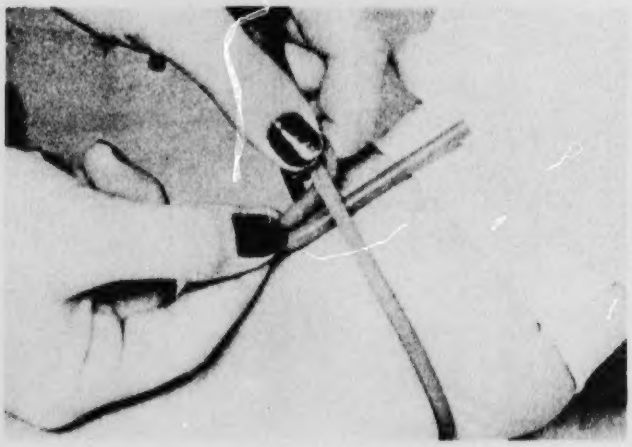


FIGURE 3

E. Instruct the patient to make a tight fist

JOB SHEET #2

F. Palpate the veins to be used lightly with forefingers to determine the exact area for venipuncture (Figure 4)

(NOTE: It may help to have the patient open and close fist several times to improve visual sight of the veins.)

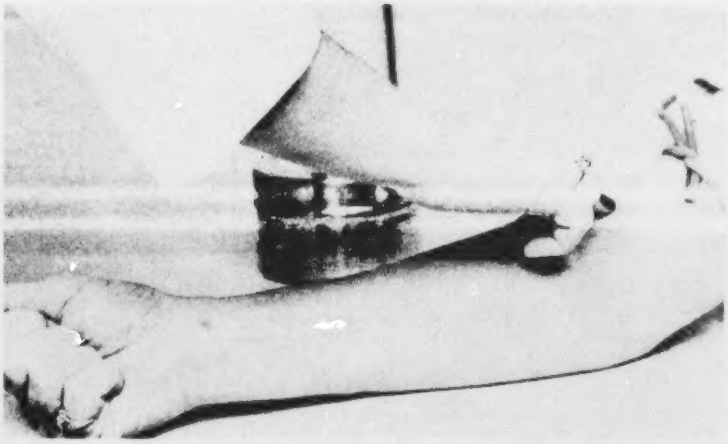


FIGURE 4

G. Cleanse the puncture area with alcohol sponge or cotton ball

H. Screw the needle into the adapter and insert the appropriate vacutainer tube into the other end of the adapter with the stopper just resting on the tip of the internal point of the needle; DO NOT penetrate the stopper (Figure 5)

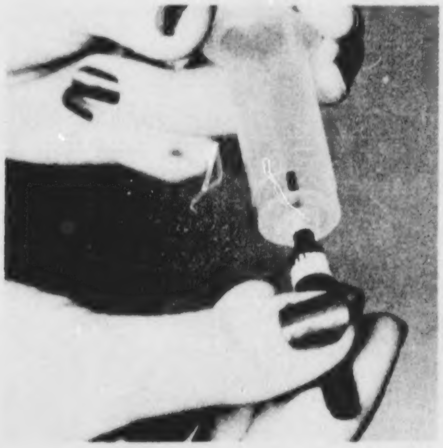


FIGURE 5

JOB SHEET #2

I. Remove the cover from the external point of the needle

J. Hold the skin taut with your thumb just below the intended puncture area and insert the external point of the needle, with the bevel up, into the vein with a quick stab (Figure 6)

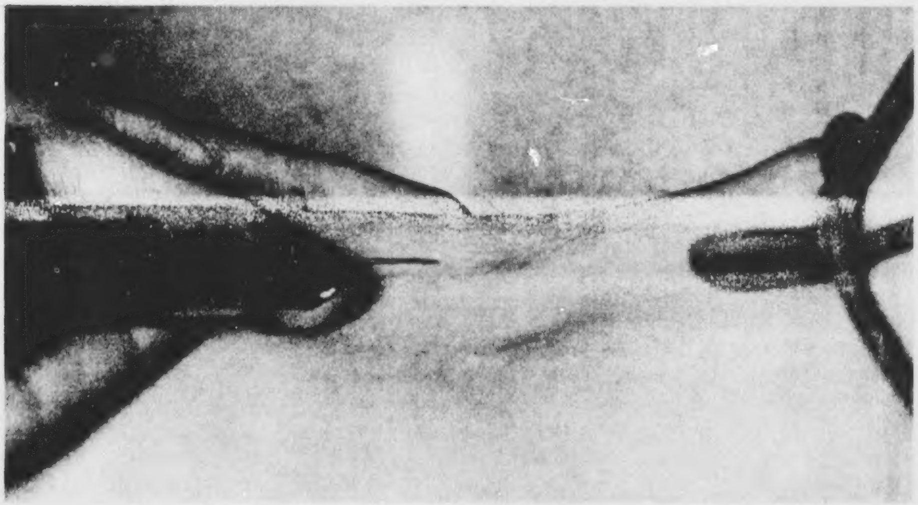


FIGURE 6

(NOTE: The needle should angle into the vein channel about 1/2 inch. Many times you can feel the vein give as the needle enters.)

JOB SHEET #2

K. Hold the adapter steady and push the vacutainer tube forward when you see a drop of blood at the internal point of the needle (Figure 7)

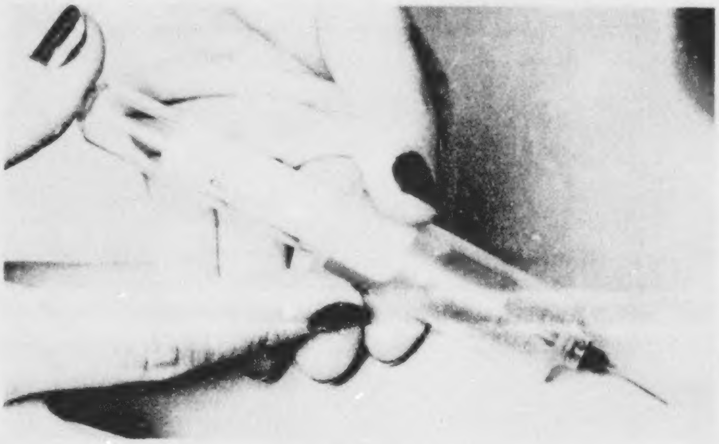


FIGURE 7

L. Push the tube until the internal needle penetrates the stopper and enters the tube (Figure 8)

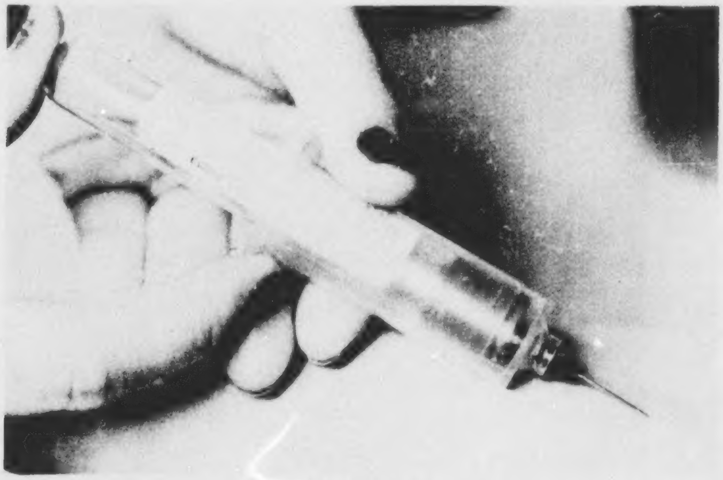


FIGURE 8

M. Release the tourniquet when you see bood flowing into the tube

N. Fill the vacutainer and change tubes if more blood is needed by removing the first tube and inserting another into the adapter

O. Place a dry cotton ball over the puncture site after quickly removing the needle

JOB SHEET #2

P. Hold it firmly in place with the arm stretched out or raised over the head for a few minutes to stop the bleeding

(NOTE: Flexing the arm often causes the blood to seep under the skin, causing a hematoma.)

Q. Identify tubes immediately and take them to the laboratory area or place them in a safe place

R. Perform diagnostic tests as ordered or send them to specific testing lab for further exam

HEMATOLOGY
UNIT XIII

TEST

NAME____ SCORE__________

1. Match terms associated with hematology to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Clot formed in a blood vessel

_____b. Deficiency of red blood cells or hemoglobin, or both

_____c. Antibody fraction of blood

_____d. Clotting of blood

_____e. Thrombus which has moved from site where it was formed

_____f. Blood cells

_____g. Study of the blood

_____h. Red blood cells

_____i. Percentage of volume of erythrocytes in whole blood

_____j. Liquid portion of blood

_____k. State of chemical balance between a cell and its environment

_____l. Agent which prevents or delays formation of blood

_____m. Depression of body functions due to failure of circulation

_____n. Abnormal discharge of blood either externally or internally

_____o. White blood cells

_____p. White blood cells having a lobed nucleus and granules in the cytoplasm

_____q. Injection of one person's blood into the blood vessels of another person

_____r. Oxygen-carrying protein pigment of red blood cells

1. Hematology
2. Homeostasis
3. Gamma globulin
4. Erythrocytes
5. Leukocytes
6. Corpuscles
7. Granulocytes
8. Hemoglobin
9. Coagulation
10. Plasma
11. Transfusion
12. Hemorrhage
13. Thrombus
14. Anemia
15. Shock
16. Embolus
17. Hematocrit
18. Anticoagulant

______s. Any of a group of fat or fatlike substances which are insoluble in water

______t. Insertion of hollow needle into marrow cavity of a flat bone to withdraw a sample of marrow

______u. Disease caused by overgrowth of white blood cells; usually terminal

______v. Condition of unknown cause that begins in the lymphatic system and involves lymph nodes with large tumor cells

______w. Disorder seen predominately in males that causes hemorrhagic bleeding

______x. Inflammation of walls of veins

______y. Abnormally dilated veins which often become hemorrhagic

______z. Sac formed by dilation of walls of an artery or vein until wall is weakened and filled with blood

____aa. Ingestion and digestion of bacteria and other cells by various white blood cells

____bb. Hereditary, chronic form of anemia caused by an abnormal S-shaped red blood cell

19. Lipid
20. Bone marrow puncture
21. Varicose veins
22. Leukemia
23. Phlebitis
24. Aneurysm
25. Hodgkin's disease
26. Hemophilia
27. Sickle cell disease
28. Phagocytosis

2. State the general functions of blood.

a. ______________________________

b. ______________________________

c. ______________________________

3. Select from the following list principal components of blood plasma. Mark each correct answer with an "X."

______a. Bile

______b. Uric acid

______c. Lipids

______d. Carbohydrates, principally glucose

______e. Heparin

______f. Casts

______g. Water

______h. Crystals

______i. Blood proteins

______j. Mineral salts

______k. Waste products

______l. Gases (oxygen, nitrogen, and carbon dioxide)

______m. Lactic acid

______n. Vitamin K

4. Distinguish between characteristics of normal blood cells. Place an "E" for erythrocytes, an "L" for leukocytes, and a "P" for platelets in the blanks provided.

______a. Fight infection

______b. Transport oxygen to cells and carbon dioxide from cells

______c. Are irregular in size and shape

______d. Can be seen in clusters

______e. Are colorless

______f. Are minute, disc-shaped cells that look alike or very similar

______g. Have an average life span of nine days

______h. Are very fragile and break easily under stress

______i. May move out of the blood vessels by passing between cells of the vessel walls

______j. Have an average life span of 120 days

______k. Remain in bloodstream unless a vessel is cut or ruptured

______l. Vary in shape and size

5. Select from the following list reasons for blood transfusions. Mark each correct answer with an "X."

______a. To aid recovery as a preoperative or postoperative procedure

______b. To treat shock

______c. To treat anemia

______d. To increase energy

______e. To replace blood lost through hemorrhage _____f. To decrease blood pressure

_____g. To improve physical appearance

_____h. To exchange blood in certain blood disorders

6. Name the four blood groups.

a. ________________________________

b. ________________________________

c. ________________________________

d. ________________________________

7. Discuss the Rh factor.

____

____

____

____

____

____

____

____

____

8. Match routine blood studies to their correct descriptions. Place the correct numbers in the blanks provided.

_____a. Scientific study of serum

_____b. Measures total volume of red corpuscles (erythrocytes)

_____c. Measures total volume of white corpuscles

_____d. Measures the amount of pigment which contains iron in the red blood cells

_____e. Measure levels of blood components from venous blood sample

1. Hemoglobin measurement
2. Total red cell count
3. Total white cell count
4. Serology
5. Blood chemistry tests

9. Name four less common blood tests done for more specific diagnoses.

   a. ______________________________

   b. ______________________________

   c. ______________________________

   d. ______________________________

10. Match the normal ranges of blood tests in adults to the correct values. Place the correct numbers in the blanks provided.

_____a.	12-18 gm%	1. Erythrocytes
_____b.	38-50 gm%	2. Leukocytes
_____c.	5,000-10,000	3. Platelets
_____d.	200,000-400,000	4. Hemoglobin
_____e.	4,500,000-5,000,000	5. Hematocrit

11. Demonstrate the ability to:

    a. Perform finger stick for capillary blood tests.

    b. Perform venipuncture for venous blood tests.

    (NOTE: If these activities have not been finished before the test, ask the instructor when they should be completed.)

HEMATOLOGY
UNIT XIII

ANSWERS TO TEST

1. a. 13
   b. 14
   c. 3
   d. 9
   e. 16
   f. 6
   g. 1
   h. 4
   i. 17
   j. 10
   k. 2
   l. 18
   m. 15
   n. 12
   o. 5
   p. 7
   q. 11
   r. 8
   s. 19
   t. 20
   u. 22
   v. 25
   w. 26
   x. 23
   y. 21
   z. 24
   aa. 28
   bb. 27
2. a. Transportation
   b. Maintenance of homeostasis
   c. Resistance to infection
3. c, d, e, g, i, j, k, l
4. a. L
   b. E
   c. P
   d. P
   e. L
   f. E
   g. L
   h. P
   i. L
   j. E
   k. E
   l. L
5. a, b, c, e, h
6. a. O
   b. AB
   c. A
   d. B
7. Discussion should include:
   a. Approximately 85 percent of the world's population have a red blood cell protein called the Rh factor; these people are Rh positive

b. Approximately 15 percent of the world's population do not have this protein; these people are Rh negative

c. When Rh positive blood is given to an Rh negative person, the recipient's Rh negative blood may produce counteracting proteins, called antibodies, which will destroy the red blood cells from the Rh positive blood; this does not happen when Rh negative blood is given to an Rh positive recipient

d. An Rh negative mother may be sensitized by proteins from an Rh positive baby

e. During pregnancies following sensitization, the mother's antibodies may pass into the blood of the unborn infant and cause erythroblastosis fetalis, a destruction of red blood cells

8. a. 4

   b. 2

   c. 3

   d. 1

   e. 5

9. Any four of the following:

   a. Platelet count

   b. Blood sugar

   c. Clotting time and bleeding time

   d. Examination of blood for parasites

   e. Bone marrow puncture

10. a. 4

    b. 5

    c. 2

    d. 3

    e. 1

11. Performance skills evaluated to the satisfaction of the instructor

ENDOCRINE SYSTEM
UNIT XIV

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of the endocrine system to assist with diagnostic procedures and treatment of the patient with conditions of this system. The student should also be able to perform tests to determine sugar and acetone content in the diabetic patient's urine and assist in patient education. This knowledge will be evidenced through completion of job sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the endocrine system to the correct definitions.
2. Select from a list fundamental facts about endocrine glands.
3. Identify major endocrine glands.
4. Select from a list general characteristics of hormones.
5. Complete a chart on major endocrine glands, their hormones, and functions.
6. Match common diseases, disorders, and procedures associated with the endocrine system to the correct definitions.
7. State ways to maintain the endocrine system.
8. State major factors which contribute to the development of diabetes mellitus.
9. Match symptoms of diabetes mellitus to the correct definitions.
10. Distinguish between symptoms or signs of diabetic coma and insulin shock.
11. Demonstrate the ability to:
    a. Perform Clinitest for sugar in urine.
    b. Perform indicator tape test for sugar in urine.
    c. Perform urine test for acetone.

ENDOCRINE SYSTEM
UNIT XIV

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and job sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information and job sheets.

   F. Provide time and materials to complete job sheets.

   (NOTE: To demonstrate Job Sheet #1 a highly sugared soft drink can be used to obtain high positive results.)

   G. Collect pictures demonstrating disorders of the endocrine system.

   (NOTE: Medical-surgical texts provide many pictures.)

   H. Elaborate on secreted hormones, if needed.

   I. Obtain animal endocrine organs to demonstrate anatomy.

   Examples: Kidneys (adrenal glands), pancreas

   J. Invite dietitian to discuss diabetic diets and the importance of point teaching.

   (NOTE: Diabetic diets are calculated in various ways. Dietitian can discuss point system, exchange lists and calorie counting systems.)

   K. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency master: TM 1--Major Endocrine Glands

   D. Job sheets

      1. Job Sheet #1--Perform Clinitest for Sugar in Urine

      2. Job Sheet #2--Perform Indicator Tape Test for Sugar in Urine

      3. Job Sheet #3--Perform Urine Test for Acetone

E. Test

F. Answers to test

III. Unit references:

A. Memmler, Ruth L., and Wood, Dena Lin. *The Human Body in Health and Disease.* Philadelphia: J.B. Lippincott Company, 1978.

B. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

C. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

IV. Additional materials:

A. Films

1. "The Endocrine Glands." American Medical Association, 535 N. Dearborn St., Chicago, Illinois 60610.

2. "Diabetes and You, Too." Oklahoma State Department of Health, 10th and Stonewall, Oklahoma City, Oklahoma 73104.

B. Filmstrips

1. "The Endocrine System." Robert J. Brady Company, Prentice-Hall, Inc., Bowie, Maryland 20715.

2. "Testing Your Urine for Sugar and Ketones." Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

ENDOCRINE SYSTEM
UNIT XIV

INFORMATION SHEET

I. Terms and definitions

   A. Diabetes insipidus--Metabolic disorder of the pituitary gland characterized by intense thirst and excretion of large amounts of urine

   B. Diabetes mellitus--Disorder of carbohydrate metabolism characterized by hyperglycemia and glycosuria

   (NOTE: Diabetes mellitus is usually caused by malfunction of pancreas that results in limited or no secretion of insulin. It may also be a result of malfunctions of other endocrine glands.)

   C. Endocrine glands--Ductless glands that secrete directly into the blood

   D. Endocrinology--Study of the endocrine system

   (NOTE: *Endocrino* refers to "secrete within.")

   E. Exocrine glands--Glands whose secretions reach the epithelial surface either directly or through a duct

   F. Hormone--Internal secretion of a gland or an organ which regulates a body function

   G. Hypersecretion--Excessive secretion

   H. Hyposecretion--Inadequate secretion

   I. Malfunction--Failure to operate in normal or usual manner

   J. Steroid--Organic compound derived from fats

   K. Tetany--Disturbed calcium metabolism resulting in intermittent muscle spasm of the extremities

   (NOTE: Tetany must not be confused with tetanus, which is an acute, infectious disease-producing toxin that causes persistent spasm of the voluntary muscles.)

II. Fundamental facts about endocrine glands

   A. Located in widely separated parts of the body

INFORMATION SHEET

B. Closely related to the nervous system in regulatory action

(NOTE: The regulatory actions of the nervous and the endocrine systems differ in the speed and duration of response. Nerve action usually occurs in a fraction of a second and lasts only as long as the stimulation is present. Endocrine action is slower and produces a more prolonged stimulation and regulation.)

C. Well-supplied with blood and often present a bleeding problem in surgery

D. Interrelated actions; hormones from one gland act upon another gland

E. Composed of epithelial and connective tissue

III. Major endocrine glands (Transparency 1)

A. Pituitary

B. Parathyroids

C. Thyroid

D. Thymus

(NOTE: The thymus produces a hormone which stimulates production of lymphocytes by the lymph glands. This gland is quite large at birth and is important in developing first immunities in the newborn. At puberty the gland diminishes in size and is replaced with connective tissue.)

E. Adrenals (Suprarenals)

F. Pancreas (Islands of Langerhans)

G. Ovaries

(NOTE: During pregnancy the female produces progesterone, estrogen, and GCH from the placenta, an organ that provides nutrition, respiration, and excretion to fetus.)

H. Testes

IV. General characteristics of hormones

A. Concentration of one hormone may influence concentration of other hormones

B. Hormones have a profound effect upon growth, development, and personality of an individual

C. Most hormones are steroids or proteins and have specific functions

INFORMATION SHEET

V. Major endocrine glands, their hormones, and functions

Gland	Hormone	Function
Pituitary	TSH (thyrotropic hormone), ACTH (adrenocorticotropic hormone), FSH (follicle stimulating hormone). LH (luteinizing hormone), ADH (antidiuretic hormone), oxytocin, prolactin, and somatotrophic hormone	Controls other glands; stimulates growth
Thyroid	Thyroxin	Controls rate of metabolism
Parathyroid	Parathormone	Regulates calcium and phosphorous metabolism
Pancreas	Insulin from Islands of Langerhans	Essential for utilization of glucose
Ovaries	Estrogen and progesterone	Development and maintenance of female reproductive organs
Testes	Testosterone	Development and maintenance of male reproductive organs
Adrenal medulla	Adrenalin	Prepares body for fight or flight
Adrenal cortex	Corticoids	Aids body in coping with stress or infection
Thymus		Aids newborn in developing immunities

VI. Common diseases, disorders, and procedures associated with the endocrine system.

A. Myxedema--Severe grade of hypothyroidism occurring in adult life

(NOTE: Symptoms include drop in temperature and pulse, weight gain, skin thickening, hair thinning and falling out, speech slowing, tongue, hands and feet increasing in size, and possible deafness.)

B. Grave's disease or exophthalmic goiter--Elevated thyroid level

(NOTE: Symptoms include extreme nervousness, profuse perspiration, flushed skin, tremor of hands, bulging eyes, increased appetite but loss of weight, and enlargement of the thyroid gland.)

INFORMATION SHEET

C. Addison's disease--Insufficient amount of hormones from the adrenal gland of the kidney

(NOTE: Symptoms include muscular weakness, loss of appetite, fatigue, dark pigmentation of the skin, hypotension, low blood sugar, low basal metabolic rate, low blood sodium, and high serum potassium.)

D. Cretinism--Disorder in infants caused from malfunction of thyroid gland in which it produces only slightly or not at all

(NOTE: Symptoms include swelling of face, enlargement of lips, thickening and protrusion of tongue. Body becomes stunted and the abdomen enlarges. Arms and legs do not grow to normal length and become short and thick. Infants can become mentally defective.)

E. Basal metabolism test (BMR)--Test that determines thyroid activity by measuring the amount of oxygen a person uses while at rest

F. Blood iodine test--Venous blood is taken to determine the amount of protein-bound iodine present

G. Gigantism--Condition caused by pituitary tumor that results in person becoming abnormally tall

(NOTE: This condition will occur if tumor develops while person is young child.)

H. Acromegaly--Condition in which tumor of pituitary develops in adult and causes bones of the face, hands, and feet to widen

(NOTE: Many tumors of the pituitary can involve the optic nerve and cause blindness.)

I. T-3, T-4--Tests using radioactive iodine in blood serum to determine levels of thyroid function

J. Thyroid scan--Test to determine thyroid function by scanning gland with special equipment after patient has taken an oral dose of a radiopaque dye

K. RIA pregnancy test--Test performed by examining serum blood to look for gonadotropin chorionic hormone (GCH) that is released into blood in a pregnant woman

(NOTE: There are other tests done to determine endocrine function and hormone levels of various glands. These are usually done in a nuclear medicine or special laboratory setting.)

INFORMATION SHEET

VII. Ways to maintain the endocrine system

- A. Adequate intake of iodine for manufacture of thyroxin

  (NOTE: Iodine is available naturally in some foods, water, or iodized salt.)
- B. Well-balanced diet
- C. Weight control
- D. Regular physical examination
- E. Observation for symptoms of endocrine malfunction

VIII. Major factors which contribute to the development of diabetes mellitus

- A. Inability to produce insulin due to injury, disease, or tumor
- B. Insulin shortage due to overeating
- C. Aging
- D. Familial tendency

IX. Symptoms of diabetes mellitus

(NOTE: There are other disorders affecting the endocrine system, but diabetes is very prevalent today and common to all ages. Health facilities are concerned with care of these patients.)

- A. Polyuria--Excessive amount of urine excreted over a period of time
- B. Polydipsia--Excessive thirst
- C. Polyphagia--Excessive craving for food
- D. Glycosuria--Presence of abnormal amount of glucose in urine
- E. Hyperglycemia--Abnormal amount of sugar in blood

X. Symptoms or signs of diabetic coma and insulin shock

- A. Diabetic coma

  (NOTE: Diabetic coma results from a lack of insulin resulting in an overload of carbohydrate, fat, and protein and causing dehydration and electrolyte imbalance.)

  1. Restlessness
  2. Thirst
  3. Drowsiness

INFORMATION SHEET

4. Rapid pulse

5. Deep respirations

6. Hot, dry, and flushed skin

7. Coma

(NOTE: If patient is in diabetic coma, some form of insulin will be given, usually IV.)

B. Insulin shock

(NOTE: Excessive insulin causes lowering of blood sugar.)

1. Headache

2. Nervousness

3. Hunger

4. Faintness

5. Sweating

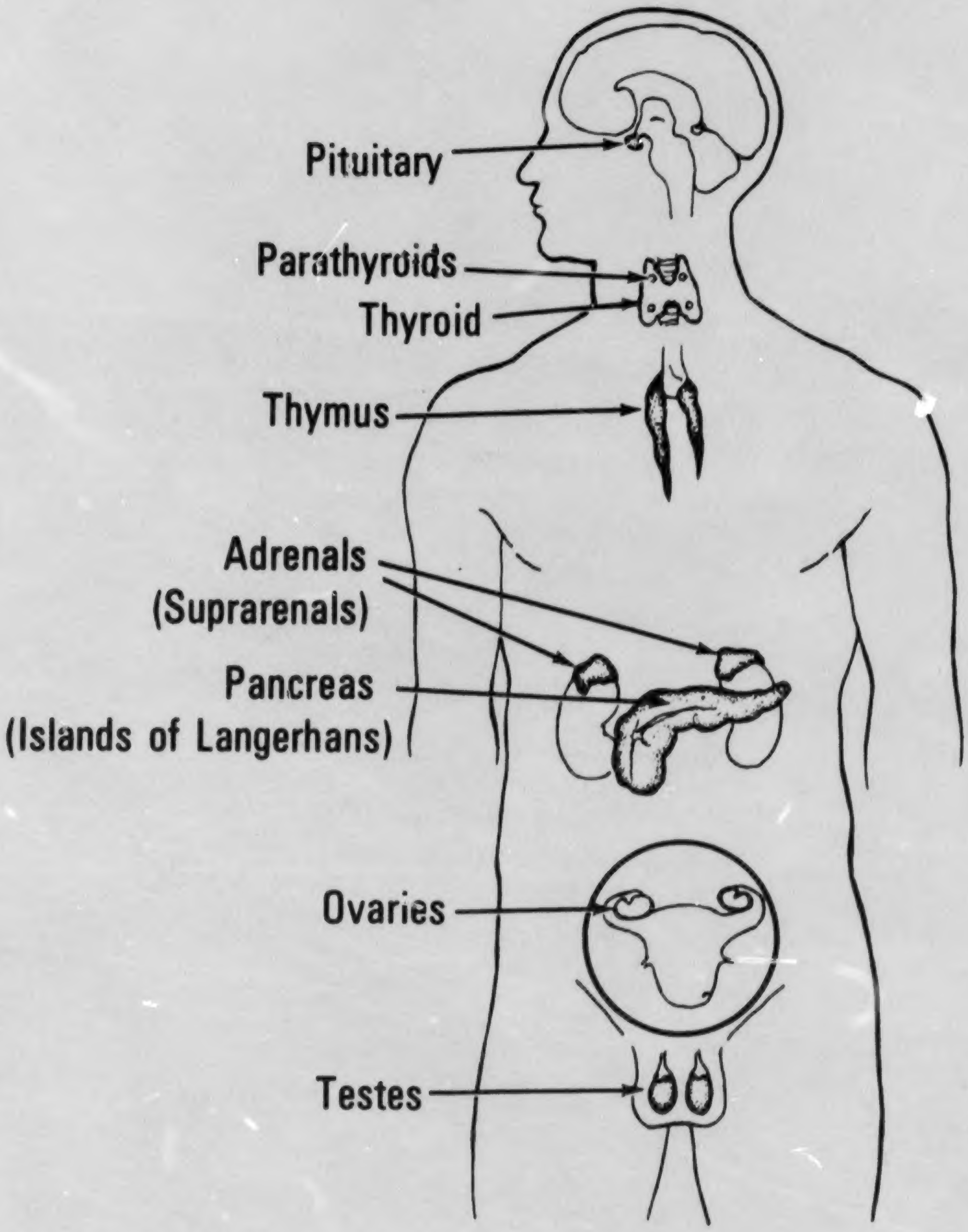
6. Cool, moist, and pale skin

7. Irrational behavior

8. Convulsions

(NOTE: Insulin shock is treated in the first stages by giving some sort of oral glucose, such as hard candy, orange juice or a sweetened soft drink. If patient is very ill, IV glucose can be given.)

Major Endocrine Glands


Pituitary
Parathyroids
Thyroid
Thymus
Adrenals
(Suprarenals)
Pancreas
(Islands of Langerhans)
Ovaries
Testes

ENDOCRINE SYSTEM
UNIT XIV

JOB SHEET #1--PERFORM CLINITEST FOR SUGAR IN URINE

(NOTE: As an MA you may be asked to instruct patients in performing their own Clinitests. Be sure to explain each step clearly and ask them to demonstrate back to you.)

I. Equipment

  A. Clinitest tablets

  B. Test tube

  C. Eyedropper

  D. Color chart

  (NOTE: Pamphlet is usually supplied with tablets.)

  E. Urine specimen container

  F. Urine specimen

II. Procedure

  A. Wash hands

  B. Identify patient and explain procedure

  C. Provide privacy

  D. Obtain mid-stream urine specimen

  (NOTE: The Clinitest is done four times a day, before meals and before bedtime unless physician's orders differ. If possible, have patient void, discard, and then get second voiding for testing.)

  E. Take specimen to laboratory area

  F. Assemble test tube, Clinitest tablet, and eyedropper on table surface near running water

  G. Hold test tube in test tube holder or between thumb and forefinger, about 30 mm (1 1/4 inch) from the top of the tube; with the other hand, draw up five drops of urine with the eyedropper

  (CAUTION: Extreme accuracy is necessary; drop the urine into the center of the test tube.)

JOB SHEET #1

H. Rinse eyedropper in running water

I. Draw ten drops of water into eyedropper and add to urine in test tube

J. Rotate test tube gently

K. Remove one Clinitest tablet from bottle and drop it into the test tube

(NOTE: Do not use tablets which are moist or have changed color. Drop one tablet into lid of bottle, then drop into test tube.)

L. Continue to hold test tube at top

(CAUTION: The dissolving tablet causes a boiling reaction, and the bottom of the test tube will become hot.)

M. Shake tube gently after fifteen seconds or after boiling stops; compare with Clinitest color chart

N. Record readings on patient's chart

(NOTE: Reactions are negative or positive. If fluid is blue, there is no sugar present and the test is considered negative. If fluid changes in color from dark green to orange, the test is positive. Check the color change in test tube with the block on the color chart indicating the degree of sugar content: trace, 1+, 2+, 3+, or 4+. The dosage of insulin prescribed for a diabetic patient will be based on the amount of sugar in the urine.)

O. Clean work area

ENDOCRINE SYSTEM
UNIT XIV

JOB SHEET #2--PERFORM INDICATOR TAPE TEST FOR SUGAR IN URINE

(NOTE: Because indicator tape tests are easy to perform and require little equipment, you may be asked to explain use to patient. Have patient return demonstration to you.)

I. Equipment

   A. Indicator tape strip

   B. Urine specimen container

   C. Urine specimen

   D. Color chart on indicator tape dispenser

II. Procedure

   A. Wash hands

   B. Identify patient and explain procedure

   C. Provide privacy

   D. Obtain urine specimen; use second voided specimen, if possible

   E. Take specimen to laboratory area

   F. Withdraw 3.81 cm (1 1/2 inch) of indicator tape from dispenser

      (NOTE: Do not use tape if it has turned brown.)

   G. Dip distal end of tape into urine and remove immediately after it has been uniformly moistened

   H. Wait one minute

      (NOTE: Use second hand on watch to time test.)

   I. Compare tape with color chart on exterior of dispenser

   J. Clean work area

   K. Record findings

      (NOTE: Usual color designations are yellow, indicating zero percent, and varying shades of green, ranging from light to dark, indicating 1+, 2+, 3+, or 4+.)

JOB SHEET #2

L. Report findings immediately

(NOTE: Patients taking certain medication may need to have their urine tested only with the indicator tape method because others will be inaccurate.)

ENDOCRINE SYSTEM
UNIT XIV

JOB SHEET #3--PERFORM URINE TEST FOR ACETONE

I. Equipment

A. Acetest tablet

B. Urine specimen container

C. Urine specimen

D. Paper towel

E. Eyedropper

F. Color chart

II. Procedure

A. Wash hands

B. Identify patient and explain procedure

C. Provide privacy

D. Obtain urine specimen

E. Take specimen to laboratory area

F. Place clean paper towel on flat, dry surface

G. Place one tablet on paper; do not touch tablet or paper

(NOTE: Drop one tablet into lid of bottle, then drop onto paper.)

H. Draw urine up in eyedropper

I. Drop one drop on tablet

J. Wait exactly thirty seconds

K. Compare color of the tablet with color chart on bottle

(NOTE: Reactions are negative or positive. If color is unchanged or tablet becomes cream colored, the test is considered negative. If tablet turns from lavender to a deep purple, the test is considered positive. Color designations are as follows: lavender indicates a trace amount of acetone; medium purple indicates a moderate amount of acetone; dark purple indicates a large amount of acetone.)

L. Report finding

ENDOCRINE SYSTEM
UNIT XIV

TEST

NAME______________________________ SCORE______________

1. Match terms associated with the endocrine system to the correct defintions. Place the correct numbers in the blanks provided.

______a. Excessive secretion

______b. Metabolic disorder of the pituitary gland characterized by intense thirst and excretion of large amounts of urine

______c. Organic compound derived from fats

______d. Disturbed calcium metabolism resulting in intermittent muscle spasm of the extremities

______e. Internal secretion of a gland or an organ which regulates a body function

______f. Disorder of carbohydrate metabolism characterized by hyperglycemia and glycosuria

______g. Inadequate secretion

______h. Failure to operate in normal or usual manner

______i. Ductless glands that secrete directly into the blood

______j. Study of the endocrine system

______k. Glands whose secretions reach the epithelial surface either directly or through a duct

1. Endocrinology
2. Hormone
3. Steroid
4. Malfunction
5. Hypersecretion
6. Hyposecretion
7. Diabetes insipidus
8. Diabetes mellitus
9. Endocrine glands
10. Exocrine glands
11. Tetany

2. Select from the following list fundamental facts about endocrine glands. Mark each correct statement with an "X."

______a. Well-supplied with blood and often present a bleeding problem in surgery

______b. Located centrally in body

______c. Composed of epithelial and muscular tissue

______d. Interrelated actions; hormones from one gland act upon another gland

______e. Closely related to the muscular system in regulatory action

3. Identify major endocrine glands on the diagram below. Write the correct names in the blanks provided.

Thymus

Pancreas (Islands of Langerhans)

Testes

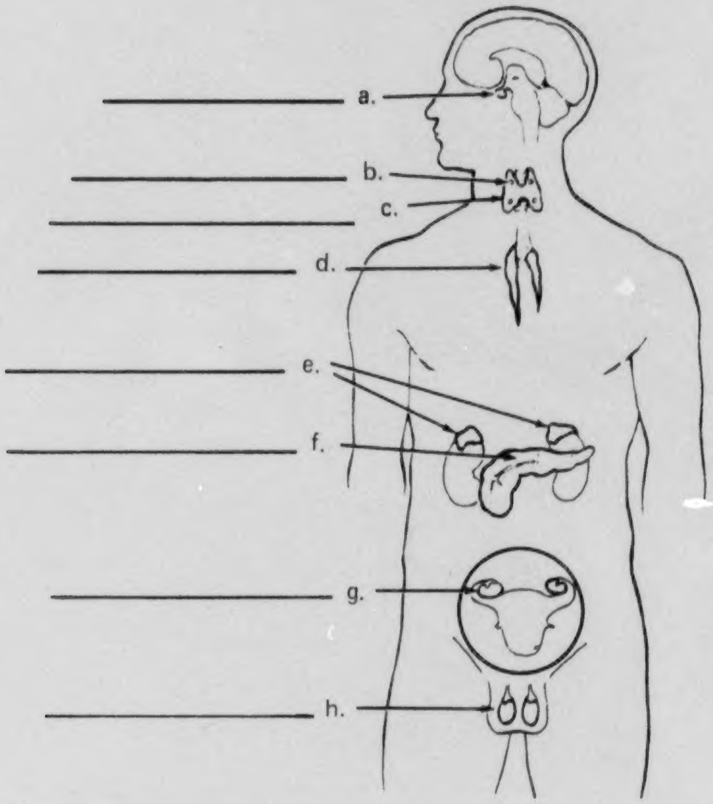
Ovaries

Thyroid

Parathyroids

Pituitary

Adrenals (Suprarenals)



4. Select from the following list general characteristics of hormones. Mark each correct answer with an "X."

______a. Most hormones are steroids or proteins and have specific functions

______b. Hormones have little effect upon growth, development, or personality of an individual

______c. Each hormone has several functions

5. Complete the following chart on major endocrine glands, their hormones, and functions. Write the correct information in the blanks provided.

Gland	Hormone	Function
Testes	a.__________________	Development and maintenance of male reproductive organs
b._______________	Thyroxin	Controls rate of metabolism
Pancreas	Insulin from Islands of Langerhans	c.__________________ ____________________
d. _______________	Adrenalin	Prepares body for fight or flight
Pituitary	TSH (thyrotropic hormone), ACTH (adrenocorticotropic hormone), FSH (follicle stimulating hormone), LH (luteinizing hormone), ADH (antidiuretic hormone), oxytocin, prolactin, and somatotrophic hormone	e.__________________ ____________________ ____________________ ____________________
f._______________	Estrogen and progesterone	Development and maintenance of female reproductive organs
Parathyroid	Parathormone	g.__________________ ____________________ ____________________
Adrenal cortex	h.__________________	Aids body in coping with stress or infection
i._______________		Aids newborn in developing immunities

6. Match common diseases, disorders, and procedures associated with the endocrine system to the correct definitions. Place the correct numbers in the blanks provided.

______ a. Severe grade of hypothyroidism occurring in adult life

______ b. Elevated thyroid level

______ c. Insufficient amount of hormones from the adrenal gland of the kidney

______ d. Disorder in infants caused from malfunction of thyroid gland in which it produces only slightly or not at all

______ e. Conditon in which tumor of pituitary develops in adult and causes the bones of the face, hands, and feet to widen

______ f. Test that determines thyroid activity by measuring the amount of oxygen a person uses while at rest

______ g. Test to determine thyroid function by scanning gland with special equipment after patient has taken an oral dose of radiopaque dye

______ h. Test performed by examining serum blood to look for gonadotropin chorionic hormone (GCH) that is released into blood in a pregnant woman

______ i. Tests using radioactive iodine in blood serum to determine levels of thyroid function

______ j. Venous blood is taken to determine the amount of protein-bound iodine present

______ k. Condition caused by pituitary tumor that results in person becoming abnormally tall

1. Addison's disease
2. Myxedema
3. Cretinism
4. Grave's disease or exophthalmic goiter
5. T-3, T-4
6. Thyroid scan
7. RIA pregnancy test
8. Acromegaly
9. Gigantism
10. Basal metabolism test (BMR)
11. Blood iodine test

7. State three ways to maintain the endocrine system.

a. ______________________________

b. ______________________________

c. ______________________________

8. State major factors which contribute to the development of diabetes mellitus.

a. ____

b. ____

c. ____

d. ____

9. Match symptoms of diabetes mellitus to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Excessive thirst

_____b. Abnormal amount of sugar in blood

_____c. Excessive craving for food

_____d. Excessive amount of urine excreted over a period of time

_____e. Presence of abnormal amount of glucose in urine

1. Polyuria
2. Polydipsia
3. Polyphagia
4. Glycosuria
5. Hyperglycemia

10. Distinguish between symptoms or signs of diabetic coma and insulin shock. Place a "DC" for diabetic coma and "IS" for insulin shock in the correct blanks.

_____a. Headache

_____b. Convulsions

_____c. Thirst

_____d. Coma

_____e. Restlessness

_____f. Rapid pulse

_____g. Hunger

_____h. Sweating

_____i. Cool, moist, and pale skin

_____j. Irrational behavior

_____k. Deep respirations

_____l. Hot, dry, and flushed skin

_____m. Faintness

_____n. Drowsiness

_____o. Nervousness

11. Demonstrate the ability to:

    a. Perform Clinitest for sugar in urine.

    b. Perform indicator tape test for sugar in urine.

    c. Perform urine test for acetone.

    (NOTE: If the above activities have not been finished before the test, ask the instructor when they should be completed.)

MA - 577-B

ENDOCRINE SYSTEM
UNIT XIV

ANSWERS TO TEST

1. a. 5
   b. 7
   c. 3
   d. 11
   e. 2
   f. 8
   g. 6
   h. 4
   i. 9
   j. 1
   k. 10
2. a, d
3. a. Pituitary
   b. Parathyroids
   c. Thyroid
   d. Thymus
   e. Adrenals (Suprarenals)
   f. Pancreas (Islands of Langerhans)
   g. Ovaries
   h. Testes
4. a
5. a. Testosterone
   b. Thyroid
   c. Essential for utilization of glucose
   d. Adrenal medulla
   e. Controls other glands; stimulates growth
   f. Ovaries
   g. Regulates calcium and phosphorous metabolism
   h. Corticoids
   i. Thymus
6. a. 2
   b. 4
   c. 1
   d. 3
   e. 8
   f. 10
   g. 6
   h. 7
   i. 5
   j. 11
   k. 9

7. Any three of the following:
    a. Adequate intake of iodine for manufacture of thyroxin
    b. Well-balanced diet
    c. Weight control
    d. Regular physical examination
    e. Observation for symptoms of endocrine malfunction
8. a. Inability to produce insulin due to injury, disease, or tumor
    b. Insulin shortage due to overeating
    c. Aging
    d. Familial tendency
9. a. 2
    b. 5
    c. 3
    d. 1
    e. 4
10. a. IS
    b. IS
    c. DC
    d. DC
    e. DC
    f. DC
    g. IS
    h. IS
    i. IS
    j. IS
    k. DC
    l. DC
    m. IS
    n. DC
    o. IS
11. Performance skills evaluated to the satisfaction of the instructor

MEDICAL TERMINOLOGY
UNIT I

UNIT OBJECTIVE

After completion of this unit, the student should be able to use common prefixes and suffixes to form medical terms. The student should also be able to use a medical dictionary and spell common medical terms. This knowledge will be evidenced through completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Distinguish between the terms "suffix" and "prefix."
2. Write the meanings of common prefixes.
3. Match common prefixes to their correct meanings.
4. Write meanings of common suffixes.
5. Divide and define medical terms.
6. Use a medical dictionary.

MEDICAL TERMINOLOGY
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide students with objective sheet.

  B. Provide students with information and assignment sheets.

  C. Discuss unit and specific objectives.

  D. Discuss information and assignment sheets.

  E. Play games to reinforce learning of medical terms.

  Example: Bingo can be played by using a paper card that has selected prefixes, suffixes and combined words in the squares. The meanings can be given and the students will mark out or cover the correct square until Bingo occurs. Students enjoy the game even more if jelly beans, lemon drops or other edibles are used to mark squares

  F. Have students make crossword puzzles or word searches using common medical terminology.

  G. Divide into teams and have a spelling bee using medical terminology.

  H. Provide medical dictionaries to assist in completing assignment sheets.

  I. Give test.

  (NOTE: Because test may be too long to give in one sitting, divide into parts and give only a few of the terms at one time.)

II. Instructional materials:

  A. Objective sheet

  B. Information sheet

  C. Assignment sheets

    1. Assignment Sheet #1--Divide and Define Medical Terms

    2. Assignment Sheet #2--Use a Medical Dictionary

  D. Answers to assignment sheets

  E. Test

  F. Answers to test

III. Unit references:

A. Fisher, J. Patrick. *Basic Medical Terminology.* Indianapolis, Indiana: Bobbs-Merrill Co., Inc., 1976.

B. Thomas, Clayton L., MD, ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

IV. Additional material--Kim, Mary, and Decker, Brian C. *Review of Medical Terminology.* New York: Thieme-Stratton, Inc.

BINGO GRID

CVA	DC	mm	post-op	psych
Sol	RLQ	via	qod	qid
o.d.	BM	FREE	gr	GU
per	pre-op	pt	O.T.	a.m.
gyn	h	s.s.	wt	amb

MEDICAL TERMINOLOGY
UNIT I

INFORMATION SHEET

I. Terms and definitions

   A. Prefix--Beginning of a word, base or phrase

   B. Suffix--Ending of a word, base or phrase

II. Meanings of common prefixes

   A. A, An--Without; lack of

   B. Ab--Away from

   C. Arthro--Joint

   D. Ad--Toward

   E. Adeno--Gland

   F. Amnio--Sack

   G. Angi or angio--Vessel

   H. Ante--Before

   I. Anti--Against

   J. Antr--Chamber

   K. Apo--Detached

   L. Athero--Fatty-like tissue

   M. Auto--Self

   N. Axilla--Armpit

   O. Bi--Two

   P. Bio--Life

   Q. Blast--Developing

   R. Brady--Slow

   S. Cap--Head

INFORMATION SHEET

T. Carcin--Cancer

U. Cardio--Heart

V. Cervico--Neck

W. Chole-; Cholecyst--Gallbladder

X. Colo--Large intestine

Y. Contra--Against

Z. Craneo--Skull

AA. Cyst--Sac

III. Prefixes and meanings

A. Chloro--Green

B. Cyan--Blue

C. Cyto--Cell

D. Derm; dermat; dermato--Skin

E. Dia--Across

F. Diplo--Double

G. Dis--Apart

H. Dys--Bad or painful

I. Enceph--Brain

J. Endo--Inside

K. Epi--Upon or after

L. Erythro--Red

M. Exo--Outside

N. Gastro--Stomach

O. Hemo-; hema-; hem-; hemato--Blood

P. Hepato--Liver

Q. Histo--Tissue

R. Hydro--Water

INFORMATION SHEET

S. Hyper--Excessive or above

T. Hypo--Under or below

U. Icter--Yellow

V. Inter--Between

W. Intra--Within or inside

X. Leuko--White

Y. Lipo--Fat

Z. Litho--Stone

AA. Mal--Bad or abnormal

BB. Masto; mammo--Breast

CC. Melano--Black

DD. Morpho--Shape or form

EE. Myo--Muscle

FF. Neo--New

GG. Nephro--Kidney

HH. Neuro--Nerve

II. Oligo--Small amount

JJ. Oophoro--Ovary

KK. Op-; ophth-; optic--Eye and vision

LL. Orchi--Testicle

MM. Orth--Straight

NN. Osteo--Bone

OO. Oto-; auri--Ear

PP. Para--Beside or near

QQ. Pedi--Child

RR. Peri--Around or surround

SS. Phleb(o)--Vein

INFORMATION SHEET

TT. Phobia--Fear

UU. Physio--Nature

VV. Pleuro--Membranes of lungs

WW. Pneumo--Lung

XX. Poly--Many or much

YY. Procto--Rectum

ZZ. Pseudo--False

AAA. Psych--Mind

BBB. Pyelo--Kidney

CCC. Recto--Rectum

DDD. Rhino--Nose

IV. Common suffixes and their meanings (Assignment Sheets #1 and #2)

A. algia--Pain

B. centesis--Surgical puncture

C. cyte--Cell

D. ectomy--Removal of

E. emia--Condition of the blood

F. gram, graph--Picture or recording

G. itis--Inflamation

H. ist--Specialist

I. megaly--Enlargement

J. natal--Birth

K. oid--Resembling

L. ology--Study of

M. orrhea--Flow or discharge

N. oma--Tumor

INFORMATION SHEET

O. osis--Condition of

P. ostomy--A new opening

Q. otomy--Cutting into

R. penia--Decrease

S. plasty--Shape or repair

T. ptosis--Falling or dropping

U. rrhagia--Breaking or bursting

V. rrhaphy--Suture or sew

W. scope--Lighted instrument for examining

X. stasis--To control or stop

Y. trophy--Nutrition

Z. uria--Urine

MEDICAL TERMINOLOGY
UNIT I

ASSIGNMENT SHEET #1--DIVIDE AND DEFINE MEDICAL TERMS

NAME ________________________________ SCORE ____________

Breaking up medical terms makes them easier to understand, spell, and write. If you know the meanings of the prefixes and suffixes you will be able to define the entire term. Use the list below to write word parts, their meanings, and then the definition.

Example:

WORD	WORD PARTS	MEANING	DEFINITION
Ophthalmoscope	Opthalm(o)	eye	A lighted viewing tool made to examine the eye
	scope	lighted viewing tool	

WORD	WORD PARTS	MEANING	DEFINITION
1. Histology	____________	____________	____________
	____________	____________	____________
2. Leukemia	____________	____________	____________
	____________	____________	____________
3. Dermatologist	____________	____________	____________
	____________	____________	____________
4. Hepatitis	____________	____________	____________
	____________	____________	____________
5. Tracheotomy	____________	____________	____________
	____________	____________	____________
6. Colostomy	____________	____________	____________
	____________	____________	____________
7. Intradermal	____________	____________	____________
	____________	____________	____________

ASSIGNMENT SHEET #1

	WORD	WORD PARTS	MEANING	DEFINITION
8.	Mammoplasty			
9.	Anuria			
10.	Neurology			
11.	Hypodermic			
12.	Lipoma			
13.	Hemostasis			

MEDICAL TERMINOLOGY
UNIT I

ASSIGNMENT SHEET #2--USE A MEDICAL DICTIONARY

NAME ____________________ SCORE __________

You will always need to keep a dictionary handy in the office for quick reference. Know how to use the dictionary to help you learn how to pronounce, spell, and learn the meanings of medical terms. Using the list of words below, look up the words and break them into word parts, and give the meaning for the words. Then work with a classmate to see if you can spell the word correctly.

WORD	WORD PARTS	MEANING
1. Myelitis		
2. Oliguresis		
3. Fibromatosis		
4. Gastrectomy		
5. Hydroma		
6. Spermatoblast		
7. Psychocatharsis		
8. Cardiostenosis		
9. Cytophagocytosis		

ASSIGNMENT SHEET #2

WORD	WORD PARTS	MEANING
10. Nephroma		
11. Salpingotomy		
12. Osteosis		
13. Hydrocephalus		
14. Laryngopharyngitis		
15. Pericarditis		
16. Cholecystectomy		
17. Nephrolithiasis		
18. Supralumbar		
19. Pathologist		
20. Diplopia		
21. Intercellular		

ASSIGNMENT SHEET #2

WORD	WORD PARTS	MEANING
22. Pneumoencephalography		
23. Glycosuria		
24. Histocyte		

MEDICAL TERMINOLOGY
UNIT I

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet #1

WORD PARTS	MEANING	DEFINITION
1. hist ology	tissue study of	Study of tissue
2. leuk emia	white condition	Condition of white blood cells
3. derma tolog(ist)	skin specialist	Specialist who deals with conditions of the skin
4. hepat itis	liver inflammation	Inflammation of the liver
5. trache otomy	trachea incision into	Incision into the trachea
6. colo ostomy	large intestine a new opening	A new opening into the large intestine
7. intra dermal	within skin	Within the skin
8. mammo plasty	breast shape or repair	Shaping or repairing of breast
9. an uria	without, lack of urine	Lack of urine
10. neuro ology	nerve study of	Study of the nerves
11. hypo dermic	under skin	Under the skin
12. lipo oma	fat tumor	Tumor composed of fat
13. hemo stasis	blood stop or control	Stop or control blood

Assignment Sheet #2

	WORD PARTS	MEANING
1.	myelos/itis	marrow inflammation
2.	olig/uresis	small amount or infrequent urination
3.	fibra/oma/osis	fiber tumor condition
4.	gaster/ektome	excision of belly
5.	hydor/oma	water tumor
6.	spermatos/blastos	seed germ (spermatozoa)
7.	psyche/katharsis	mind purging
8.	cardio/stenosis	heart narrowing
9.	cyto/phagein/kytos/osis	cells eating other cells
10.	nephro/oma	kidney tumor
11.	salpingx/tome	tube cutting
12.	osteon/osis	bone condition
13.	hydro/cephale	water head
14.	laryngo/pharynx/itis	larynx and pharynx inflammation
15.	peri/cardia/itis	around heart inflammation
16.	chole/cyst/ectomy	bile bladder excision of (removal of gallbladder)
17.	nephro/lithiasis	kidney calculi (stones)
18.	supra/lumbar	above lumbar
19.	pathos/logos	disease study
20.	diplous/ope	double sight
21.	inter/cellular	between cells
22.	pneumo/encephalo/graphy	air head to write (x-ray exam of head following the introduction of air)
23.	glycos/uria	sweet urine
24.	histos/cytos	tissue cell

MEDICAL TERMINOLOGY
UNIT I

TEST

NAME______________________________ SCORE__________

1. Distinguish between the terms "suffix" and "prefix." Write an "S" before the definition of suffix, and a "P" before the definition of prefix in the blanks provided.

_____a. Beginning of a word, base, or phrase

_____b . Ending of a word, base, or phrase

2. Write the meanings for each of the following common prefixes.

a. Cap--______________________________

b. Bi--______________________________

c. Anti--______________________________

d. Chole-; cholecyst--______________________________

e. Ab--______________________________

f. Craneo--______________________________

g. Brady--______________________________

h. Angi or angio--______________________________

i. Ad--______________________________

j. A, An--______________________________

k. Antr--______________________________

l. Cyst--______________________________

m. Colo--______________________________

n. Athero--______________________________

o. Axilla--______________________________

p. Ante--______________________________

q. Adeno--______________________________

r. Bio-- ______________________________

s. Auto-- ______________________________

t. Amnio-- ______________________________

u. Apo-- ______________________________

v. Blast-- ______________________________

w. Carcin-- ______________________________

x. Cervico-- ______________________________

y. Cardio-- ______________________________

z. Contra-- ______________________________

aa. Arthro-- ______________________________

3. Match common prefixes to the correct meanings. Write the correct numbers in the blanks provided. (A blank may have more than one correct answer.)

______a. Brain
______b. Outside
______c. Double
______d. Apart
______e. Inside
______f. Upon or after
______g. Cell
______h. Across
______i. Skin
______j. Stomach
______k. Green
______l. Bad or painful
______m. Blue
______n. Red
______o. Blood

1. Chloro
2. Cyan
3. Cyto
4. Derm; dermat; dermato
5. Dia
6. Diplo
7. Dis
8. Dys
9. Enceph
10. Endo
11. Epi
12. Erythro
13. Exo
14. Gastro
15. Hemo; Hema; hem; hemato

______p. Breast
______q. Liver
______r. New
______s. Kidney
______t. Nerve
______u. Muscle
______v. Eye and vision
______w. Between
______x. Straight
______y. Water
______z. Under or below
____aa. White
____bb. Small amount
____cc. Black
____dd. Testicle
____ee. Yellow
____ff. Within or inside
____gg. Tissue
____hh. Ovary
____ii. Shape or form
____jj. Fat
____kk. Bad or abnormal
____ll. Bone
____mm. Excessive or above
____nn. Stone
____oo. Fear
____pp. Membranes of lungs
____qq. Vein

16. Hepato
17. Histo
18. Hydro
19. Hyper
20. Hypo
21. Icter
22. Inter
23. Intra
24. Leuko
25. Lipo
26. Litho
27. Mal
28. Masto; mammo
29. Melano
30. Morpho
31. Myo
32. Neo
33. Nephro
34. Neuro
35. Oligo
36. Oophoro
37. Op-; ophth-; optic
38. Orchi
39. Orth
40. Osteo
41. Oto-; auri
42. Para
43. Pedi

____rr. Ear

____ss. Many or much

____tt. Around or surround

____uu. Nose

____vv. Rectum

____ww. Beside or near

____xx. False

____yy. Child

____zz. Nature

____aaa. Lung

____bbb. Mind

____ccc. Kidney

44. Peri
45. Phleb(o)
46. Phobia
47. Physio
48. Pleuro
49. Pneumo
50. Poly
51. Procto
52. Pseudo
53. Psych
54. Pyelo
55. Recto
56. Rhino

4. Write the meanings of the following common suffixes.

a. ostomy--____________________

b. plasty--____________________

c. trophy--____________________

d. orrhea--____________________

e. itis--____________________

f. uria--____________________

g. algia--____________________

h. ectomy--____________________

i. penia--____________________

j. stasis--____________________

k. ptosis--____________________

l. cyte--____________________

m. emia--____________________

n. scope--____________________

o. rrhagia--____________________

p. otomy--____________________

q. ology--____________________

r. megaly--____________________

s. centesis--____________________

t. gram, graph--____________________

u. ist--____________________

v. natal--____________________

w. oid--____________________

x. oma--____________________

y. osis--____________________

z. rrhaphy--____________________

5. Divide and define medical terms.

6. Use a medical dictionary.

(NOTE: If activities 5 and 6 have not been finished before the test, ask your instructor when they should be completed.)

MEDICAL TERMINOLOGY
UNIT I

ANSWERS TO TEST

1.	a.	P
	b.	S

2.	a.	Head	o.	Armpit
	b.	Two	p.	Before
	c.	Against	q.	Gland
	d.	Gallbladder	r.	Life
	e.	Away from	s.	Self
	f.	Skull	t.	Sack
	g.	Slow	u.	Detached
	h.	Vessel	v.	Developing
	i.	Toward	w.	Cancer
	j.	Without; lack of	x.	Neck
	k.	Chamber	y.	Heart
	l.	Sac	z.	Against
	m.	Large intestine	aa.	Joint
	n.	Fatty-like tissue		

3.	a.	9	h.	5	o.	15	v.	37
	b.	13	i.	4	p.	28	w.	22
	c.	6	j.	14	q.	16	x.	39
	d.	7	k.	1	r.	32	y.	18
	e.	10	l.	8	s.	33	z.	20
	f.	11	m.	2	t.	34	aa.	24
	g.	3	n.	12	u.	31	bb.	35

cc. 29
dd. 38
ee. 21
ff. 23
gg. 17
hh. 36
ii. 30
jj. 25
kk. 27
ll. 40
mm. 19
nn. 26
oo. 46
pp. 48
qq. 45
rr. 41
ss. 50
tt. 44
uu. 56
vv. 51, 55
ww. 42
xx. 52
yy. 43
zz. 47
aaa. 49
bbb. 53
ccc. 54

4. a. A new opening
b. Shape or repair
c. Nutrition
d. Flow or discharge
e. Inflammation
f. Urine
g. Pain
h. Removal of
i. Decrease
j. To control or stop
k. Falling or dropping
l. Cell
m. Condition of the blood
n. Lighted instrument for examining
o. Breaking or bursting
p. Cutting into
q. Study of
r. Enlargement
s. Surgical puncture
t. Picture or recording
u. Specialist

- v. Birth
- w. Resembling
- x. Tumor
- y. Condition of
- z. Suture or sew

5. Evaluated to the satisfaction of the instructor
6. Evaluated to the satisfaction of the instructor

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

UNIT OBJECTIVE

After completion of this unit, the student should be able to effectively communicate with persons and handle problems systematically. This knowledge will be evidenced through completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with human relations and communications to the correct definitions.
2. Select from a list ways to get along with supervisors.
3. State ways to get along with co-workers.
4. Select from a list ways to get along with patients.
5. Describe ways to handle difficult persons.
6. Match defense mechanisms to the correct definitions.
7. Arrange in order steps in problem solving.
8. Select from a list ways to improve communications skills.
9. Describe important factors to consider when using non-verbal gestures.
10. Describe care and treatment of terminally ill patients and their families.
11. Complete self-analysis.
12. Determine personal maturity in coping with problems.
13. Use steps to solve a problem.
14. Use defense mechanisms.
15. Pronounce words distinctly.
16. Give orders, directions, and instructions.
17. Analyze voice qualities.

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and assignment sheets.

   C. Discuss unit and specific objectives.

   D. Make transparencies.

   E. Discuss information sheet.

   F. Invite an office manager to speak to class on how to get along with people.

   G. Use the following twenty factors to build a "Success Pyramid" for a bulletin board or to reproduce as a checksheet.

   (NOTE: These factors were shown to be of greatest importance for career success as revealed in 1949 and 1970 studies. See the next page for the sample "Success Pyramid.")

      1. Dependability

      2. Accuracy in performing operations

      3. Ability to follow instructions accurately and without repetition

      4. Attendance, tardiness, and strict observance of break and lunch periods

      5. Speed in performing operations; amount of acceptable work produced

      6. Capacity for remembering necessary details, figures, and instructions

      7. Initiative and/or resourcefulness

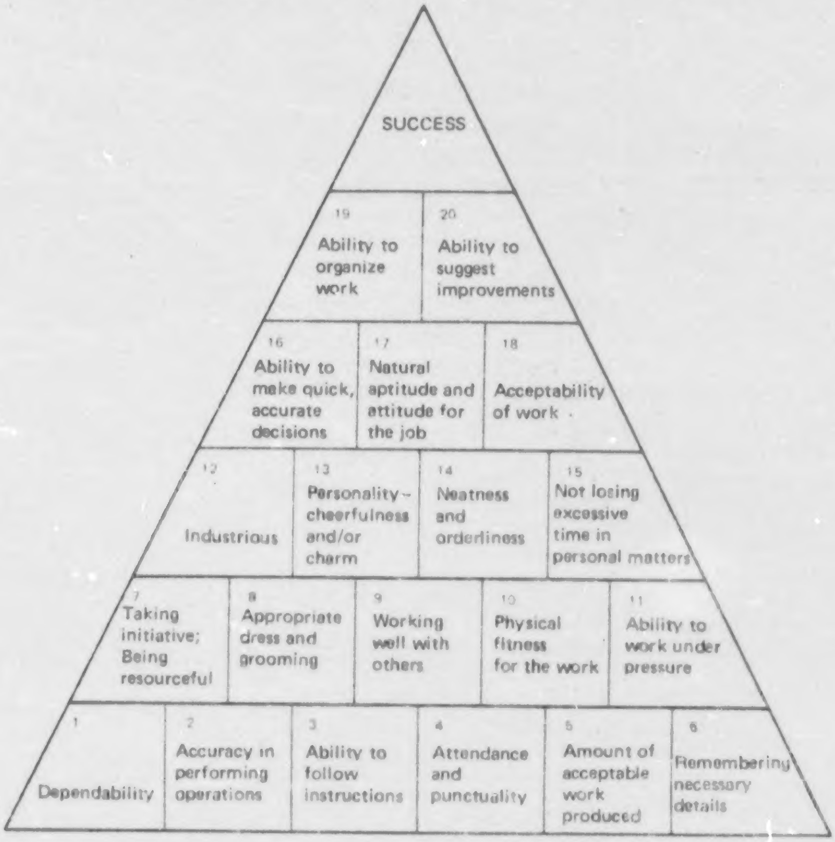
      8. Personal appearance; appropriate dress and grooming

      9. Ability to maintain harmonious working relations with others

      10. Physical fitness for the work

      11. Ability to work under pressure or abnormal conditions, such as meeting deadlines, multiple assignments, and extra work

12. Industrious
13. Personality; cheerfulness and/or charm
14. Neatness and orderliness and maintenance or arrangement of physical surroundings, such as desks, files, and floor
15. Does not lose excessive time in personal telephone calls, talking with co-workers, going to the restroom, and other personal activities
16. Ability to make judgments or decisions quickly and accurately
17. Natural ability and aptitude and attitude for the job
18. Acceptability of work; within acceptable work standards for the job
19. Ability to organize work
20. Ability to suggest improvements in work techniques and operations


SUCCESS
19 Ability to organize work
20 Ability to suggest improvements
16 Ability to make quick, accurate decisions
17 Natural aptitude and attitude for the job
18 Acceptability of work
12 Industrious
13 Personality–cheerfulness and/or charm
14 Neatness and orderliness
15 Not losing excessive time in personal matters
7 Taking initiative; Being resourceful
8 Appropriate dress and grooming
9 Working well with others
10 Physical fitness for the work
11 Ability to work under pressure
1 Dependability
2 Accuracy in performing operations
3 Ability to follow instructions
4 Attendance and punctuality
5 Amount of acceptable work produced
6 Remembering necessary details

H. Provide tape recorder for voice analysis.

I. Use Assignment Sheet #4 to roleplay each behavior. Divide class into teams and make a game like Charades to stress how defense mechanisms are used.

J. Discuss and assist with assignment sheets.

K. Invite hospital clergyman or a resource person who works closely with terminally ill patients and their families to speak on ways to help these people.

L. Give test.

II. Instructional materials:

A. Objective sheet

B. Information sheet

C. Transparency masters

1. TM 1--Steps to Solve a Problem
2. TM 2--Communicating

D. Assignment sheets

1. Assignment Sheet #1--Complete Self-Analysis
2. Assignment Sheet #2--Determine Personal Maturity in Coping With Problems
3. Assignment Sheet #3--Use Steps to Solve a Problem
4. Assignment Sheet #4--Use Defense Mechanisms
5. Assignment Sheet #5--Pronounce Words Distinctly
6. Assignment Sheet #6--Give Orders, Directions, and Instructions
7. Assignment Sheet #7--Analyze Voice Qualities

E. Test

F. Answers to test

III. Unit references:

A. Cooper, Marian and Bredow, Miriam. *The Medical Assistant*. New York: McGraw-Hill Book Company, 1978.

B. Nelson, Frank. *Interdisciplinary Cooperative Education*. Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1979.

IV. Filmstrips:

A. "Verbal Barriers to Communication." Available from Trainex Corporation, P.O. Box 116, Garden Grove, CA 92642.

B. "Non-Verbal Barriers to Communication." Trainex Corporation.

C. "Effective Listening." Trainex Corporation.

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

INFORMATION SHEET

I. Terms and definitions

   A. Communication--All ways meanings are conveyed from one person to another

   B. Defense mechanism--Behavior used to cope with difficulties

   C. Grieving response--Five stages of emotional response of the person facing death

      (NOTE: The five stages are denial and isolation, anger, bargaining, depression, and acceptance; all are experienced but not always in sequence. Some stages may be experienced more than once.)

   D. Human relations--Forming interpersonal relationships and developing a working rapport with others

II. Ways to get along with supervisors

   (NOTE: Your supervisor may be the physician, office manager or a head nurse.)

   A. Accept the authority of the person in charge

   B. Accept helpful corrections and attempt to learn

   C. Admit your limitations and ask for assistance when needed

   D. Leave personal problems at home

   E. Be enthusiastic about your job and willing to take on more responsibilities when asked

   F. Be dependable

III. Ways to get along with co-workers (Assignment Sheet #1)

   A. Know all co-workers by name

   B. Introduce yourself to other employees when you begin job

   C. Be cordial and speak to other employees

   D. Listen, ask questions, and thank other employees who are training you

   E. Do not gossip about patients, co-workers, supervisors, or employers

INFORMATION SHEET

F. Work out personality differences among those affected, or take problems to supervisor, if necessary

(NOTE: It is difficult to work closely in an office without some problems arising. Everyone has their moods and problems and you must learn to cope. Find some good in everyone and try to think positively.)

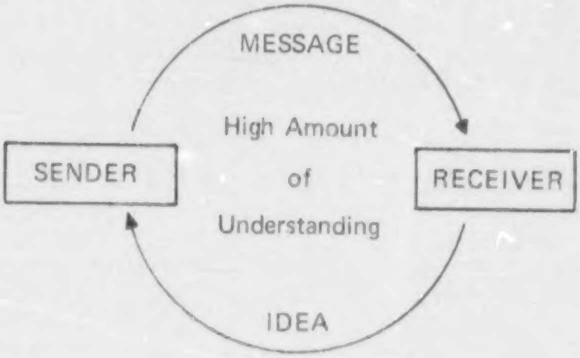
G. Be considerate of others' feelings and property

(NOTE: It is not a good practice to borrow personal items or loan them out. If you do borrow something be sure that it is returned quickly and in good condition.)

H. Develop open communication and good listening habits

(NOTE: Do not harbor ill feelings or anger. Try to talk about your feelings without arguing or raising your voice.)

Example:



IV. Ways to get along with patients

(NOTE: Remember that patients are the reason for a medical practice and your reason for being employed.)

A. Respect each patient as a person

(NOTE: You may have to readjust some of your thinking in dealing with some persons. They may not meet your ideal of what a person should be, but they are human beings and individuals with rights just as you are.)

B. Approach patients with self-confidence and sincerity

INFORMATION SHEET

C. Try to remember your patients' names, problems, families, and medical histories

D. Realize that there will always be some difficult patients

(NOTE: There are some very good reasons why patients become difficult. They may be frightened, nervous, angry, confused due to the illness, or have problems with finances.)

E. Never argue with patients or their families

V. Ways to handle difficult persons

(NOTE: Difficult persons can be anyone from the patient, the family, salespersons, or the physician's wife or husband. Handle with firmness and tact, even though you may be forced to grit your teeth and smile.)

A. Aggressive/amorous

1. Be very professional when any suggestions or overtures are made

2. Try to ignore remarks or actions that are really aggressive

(NOTE: Many times these overtures are a bid for attention and can be an indication of some physical or psychological problem. Carefully analyze the situation before you say something or take action. If you believe this might be a part of the patient's problem, then talk it over with the physician.)

B. Complainer

1. Counteract comments with cheerful positive statement

(NOTE: This is true if the person is a co-worker. If the complainer is a patient listen carefully to see if you can determine the undercurrent of the complaints.)

Example: If a patient complains hotly about a bill or the treatment, he or she really might be worried about making payment or worried about the illness itself

2. Do not complain to others in the office, as it tends to be contagious

C. Combative/hostile

1. Determine cause of problem

2. Be calm but firm

3. Get assistance if needed

INFORMATION SHEET

D. Bossy

1. Avoid conflict with a person who is not your supervisor

2. Pay attention to details and follow directions as accurately as possible

E. Demanding

1. Be tactful but stand firm on what you need to do

2. Try to meet some of demands

VI. Defense mechanisms (Assignment Sheet #4)

(NOTE: Everyone uses defense mechanisms to some degree. When use is exaggerated, then the person may need assistance to cope with reality.)

A. Denial--Refusal to recognize an unpleasant or anxiety-producing situation

Example: Most individuals deny having a serious or fatal illness when they first learn of it; some deny it until death

B. Suppression--Voluntary exclusion of unpleasant ideas, feelings, or situations from the conscious level of thought

Example: The person says, "I am not going to think about it," and is then able to put the unpleasant thought aside

C. Repression--Involuntary exclusion of unbearable ideas, feelings, or situations from the conscious level of thought

Example: The child is frightened badly by a large, black dog; in later life the fear of black dogs remains although the original incident is not remembered

D. Compensation--Development of a personality trait or physical ability to overcome a real or imagined deficiency

Example: A small or insecure person acts tough and boisterous

E. Sublimation--Substitution of a socially acceptable behavior for one which is not acceptable

Example: A physical activity or sport such as tennis can be used to work off feelings of frustration or anger

INFORMATION SHEET

F. Identification--Vicarious achievement or enjoyment through another person or group, a book, or a movie

(NOTE: Identification, imitation, and introjection have slightly different meanings but are used interchangeably by some.)

Example: When watching a movie an individual experiences joy and sadness with the film portrayal

G. Imitation--Conscious copying of the actions of others

Example: Much of childhood learning is accomplished through imitation of the actions of others

H. Introjection--Unconscious process whereby a quality or attribute of another is taken and made a part of the personality

Example: The political beliefs of a friend or associate are accepted unconsciously

I. Rationalization--Conscious or unconscious justification of a thought or action

Example: Purchase of an unnecessary item at a sale is justified by saying the bargain was too good to not take advantage of

J. Displacement--Transfer of feelings from one situation or person to another

Example: A patient feels anger or resentment because of the tests and treatment ordered by the physician but vents the feelings on nursing personnel. Unconsciously the patient sees the doctor as an authority figure and views the nurse as a sympathetic listener

K. Regression--Return to an earlier, more comfortable level of development either consciously or unconsciously

Example: Young children may revert to infantile behavior at the birth of a new baby in the family; many times ill patients regress to a more helpless or dependent role

L. Conversion reaction--Emotional conflict expressed as a physical symptom

Example: A student, anxious about the ability to pass a test successfully, develops a severe headache

M. Fantasy--Conscious distortion of unconscious wishes or needs

Example: A child who feels rejected by playmates daydreams of doing brave deeds to impress them

INFORMATION SHEET

VII. Steps in problem solving (Transparency 1; Assignment Sheets #2 and #3)

  A. Recognize the problem

  B. Get the facts

  C. Weigh the facts

  D. Determine the objectives

  E. Make a decision

  F. Take action

  G. Check results

VIII. Ways to improve communications skills (Transparency 2; Assignment Sheets #5, #6, and #7)

  A. Get the listener's attention and interest

  B. Use questions wisely

    1. Find out what the person already knows

    2. Find out if the listener is understanding what is being said

  C. Talk about only one subject at a time and relate all comments to that theme

  D. Avoid the use of technical terms unless you know listener is familiar with them

  E. Plan what you are going to say in advance for times when you must convince someone or explain something

    1. State what you are going to do

    2. Outline briefly the arguments or steps to reach your objective

  F. Encourage the listener to ask questions and participate

  G. Think before responding to questions

  H. Speak distinctly

INFORMATION SHEET

IX. Important factors to consider when using non-verbal gestures

A. Patients are very sensitive to their surroundings when they are nervous and anxious

B. Health care workers must be very careful how they communicate with patients and among themselves

C. A non-verbal gesture can mean one thing to you and another to someone else

Examples: Shrug, frowning, a raised eyebrow

D. Think before you use any non-verbal gestures

X. Care and treatment of terminally ill patients and their families

(NOTE: In some offices, medical assistants will see patients who come in for treatment and follow-up exams, who are terminally ill. The MA needs to be aware of the needs of the patient *and* the family.)

A. Allow patient and family to express their feelings and ask questions

(NOTE: Patients and families will go through stages of the grieving process and will need to receive care and support throughout the illness.)

B. Answer questions as honestly as possible or talk with the physician about the concerns that need to be dealt with

C. Find out what the patient knows about his or her illness before care is given

(NOTE: Many times the patient or the family members do not wish the person to know the diagnosis and the patient does not want his or her family to be told the prognosis.)

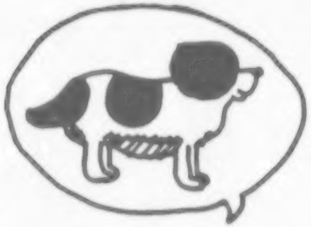
D. Help the patient to maintain dignity and work through the illness especially if there is a physical deformity or loss of function of a body part

E. Encourage patient to continue all follow-up care and explain all treatment before it takes place

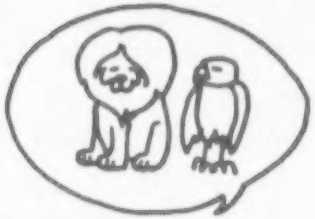
Steps To Solve a Problem...

1. RECOGNIZE THE PROBLEM
2. GET THE FACTS
3. WEIGH THE FACTS
4. DETERMINE THE OBJECTIVE
5. MAKE A DECISION
6. TAKE ACTION
7. CHECK RESULTS

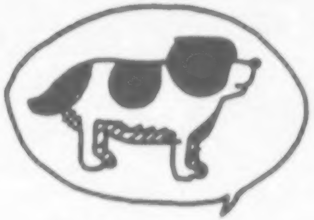
Communicating



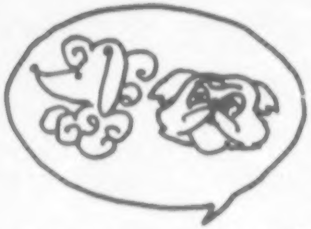
"I HAVE A PET AT HOME"



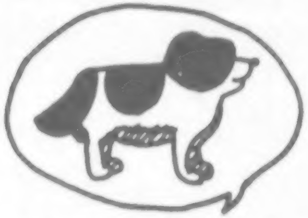
"OH,WHAT KIND OF A PET?"



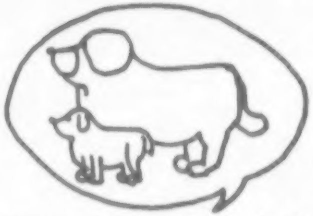
"IT IS A DOG"



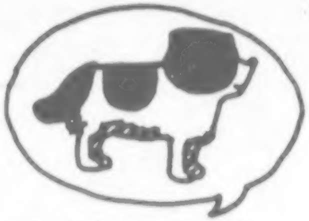
"WHAT KIND OF A DOG?"



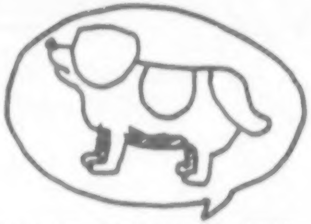
"IT IS A ST. BERNARD"



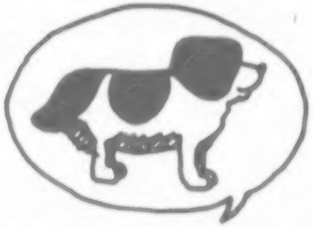
"GROWN UP OR A PUPPY?"



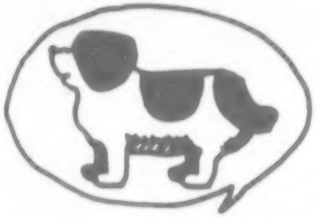
"IT IS FULL GROWN"



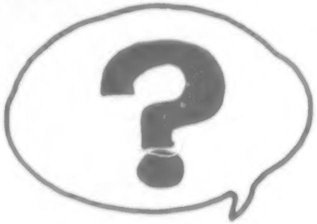
"WHAT COLOR IS IT?"



"IT IS BROWN AND WHITE"



"WHY DIDN'T YOU SAY YOU
HAD A FULL GROWN BROWN
AND WHITE ST. BERNARD AS
A PET IN THE FIRST PLACE?"



"WHY DOESN'T ANYBODY UNDERSTAND ME ?"

DO NOT ASSUME EVERYONE UNDERSTANDS COMMON WORDS

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ASSIGNMENT SHEET #1--COMPLETE SELF-ANALYSIS

NAME ____ SCORE ____________

Answer the following questions honestly as they apply to your job and/or classroom experiences by checking the most appropriate column. Then analyze the statements checked "Sometimes" and "Never."

	Never	Sometimes	Always
1. Are you able to act naturally under all circumstances?			
2. Do you seek opportunities to meet those in positions of authority?			
3. Do you avoid criticizing others?			
4. Are you able to give credit to others for what they do, rather than seek first to obtain credit for yourself?			
5. Do you try to have a positive attitude?			
6. Do you have bad breaks?			
7. Do you approach your work confidently?			
8. Do you think your friends are more capable than you are at most things?			
9. Do you try to improve your attitudes?			
10. Do you feel others are luckier than you are?			
11. When you fail, do you come right back?			
12. Do you treat patients and co-workers as though they were important?			
13. Do you expect to succeed?			
14. Are you honest?			
15. Are you willing to accept more responsibility on your job?			

ASSIGNMENT SHEET #1

	Never	Sometimes	Always
16. Are you free from bad habits which will hinder your progress?			
17. Do you discharge your duties promptly and efficiently and with little or no supervision?			
18. Do you finish the things you start?			
19. Do you feel your present job can help you in your future career?			
20. When you see your friends succeed, do you wish you were doing what they are?			
21. Do you feel that limitations are things you put on yourself?			
22. Do you try to appreciate, understand, and show a sincere interest in patients and co-workers?			
23. Do you try to learn as much as you can at work?			
24. At work, do you try to be a real service to people on the job?			
25. Do you try to improve your memory of medical histories and patients' families?			
26. Do you work to be free from superstitions and prejudices?			
27. Do you listen attentively to what people say without interrupting them?			
28. Do you observe closely what is going on around you and understand the significance of it?			
29. By reading and studying, do you keep informed about current events, your work, your future career, and subjects of popular interest?			
30. Can you be depended upon to keep your promises to patients and co-workers?			

ASSIGNMENT SHEET #1

	Never	Sometimes	Always
31. Do you defend from unjust criticism the persons and things with which you are identified?			
32. Do you work toward your goals?			
33. Do you measure success by money?			
34. Do you try to achieve one goal at a time?			
35. Do you believe we become what we think about, what we concentrate on achieving?			
36. Do you believe the most useful goals are specific goals?			
37. Do you feel successful people do not have problems?			
38. Do you worry about past mistakes and failures?			
39. Do you control your temper?			
40. Do you often feel enthusiastic about something you wish to do?			
41. Are you able to make decisions about everyday things easily?			
42. Are you able to interest yourself in the details of your job?			
43. Are you careful not to hold grudges against people?			
44. Do you usually look on the bright side of situations?			
45. Are you able to work pleasantly with others?			
46. Do you believe that we receive rewards by giving service to others?			
47. Do you try to find ways to help other people at work?			
48. Do you believe it is important for a person in business to be civic-minded?			

ASSIGNMENT SHEET #1

	Never	Sometimes	Always
49. Do you find your dealings with others at work very frustrating?			
50. Do you try to be cooperative?			
51. Do you avoid carrying tales and gossiping about others?			
52. Do you try to see the other person's point of view?			
53. Do you refrain from telling others what you think of them?			
54. Do you avoid arguments?			
55. Do you avoid making fun of others?			
56. Do you keep out of other people's business?			
57. Do you avoid finding fault with everyday little things?			
58. Do you keep your personal troubles to yourself on the job?			
59. Do you feel honesty is the way to success?			
60. Do you really enjoy your work?			
61. When you feel "down" do you try to work harder?			
62. Do you think about others on special occasions, such as their birthdays and in sorrow and happiness, and do you send them some expression of your thoughts?			
63. Do you congratulate your friends on their achievements?			
64. Do you learn, remember, and use the names of the people you meet?			
65. Do you know the rules of etiquette and observe them?			

ASSIGNMENT SHEET #1

	Never	Sometimes	Always
66. Do you think about the rights of others before you think of your own?			
67. Do you show respect for everyone regardless of position?			
68. Are you appreciative for everything one does for you and always thank him or her?			
69. Do you believe people who work hard make it unnecessarily difficult on others?			
70. Do you try to improve?			
71. Do you want to be like your present friends?			
72. Do your friends try to operate at their best potentials?			
73. Do you realize how much your friends influence your achievements?			
74. Are you well-groomed?			
75. Do you do just enough to get by?			
76. Do you smile often?			
77. Do you really know that you are a unique and valuable person?			
78. Do you think about exciting possibilities in your future work?			
79. Do you try to improve your human relations skills?			
80. Do you feel you are mature in your attitudes, outlook, and actions?			
81. Do you try to see yourself as others see you?			
82. Do you feel you could increase your productivity at work?			
83. Do you feel that wanting money is wrong?			
84. Do you believe there is any value in accumulating wealth?			

ASSIGNMENT SHEET #1

	Never	Sometimes	Always
85. Do you believe how much money we earn is determined by how hard it would be to replace us?			
86. Do you feel it is wrong for your employer to make a profit?			
87. Do you realize that profit provides jobs?			
88. Do you try to make every day count?			
89. Do you jump from one thing to another when trying to accomplish things?			
90. Do you try to plan your time wisely?			
91. Do you believe that for every effect there is a cause?			
92. When there is a problem at work or at school, do you try to be part of the solution?			
93. Do you get impatient with yourself?			
94. Are you patient with others?			
95. Do you feel you will be rewarded in some way if you do well at work or at school?			
96. Do you refrain from exaggeration?			
97. Do you avoid flattering people for personal gain?			
98. Do you avoid embarrassing others?			
99. Do you return what you borrow to its proper place?			
100. Do you accept at least partial blame for failures?			
101. Do you respect your parents, elders, employers, and people in authority?			
102. Do you have a tendency to try to top a remark made by a previous speaker during a conversation?			

ASSIGNMENT SHEET #1

	Never	Sometimes	Always
103. Are you usually ill at ease with strangers?			
104. Are you critical and bossy?			
105. Do you ridicule people who are not present?			
106. Do you laugh at others' mistakes?			
107. Are you suspicious of other people's motives?			
108. Do you avoid talking about yourself, what you own, and your successes?			
109. Do you use belittling words and jokes about those with different sex, race, politics, religion, and beliefs?			
110. Do you believe that successful people frequently ask themselves, "How can I give more service to others?"			
111. Do you use illness as an excuse for not doing well on a job?			
112. Do you try not to prejudge patients and other people at work?			

MA - 57-C

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ASSIGNMENT SHEET #2--DETERMINE PERSONAL MATURITY IN COPING WITH PROBLEMS

NAME ______________________________ SCORE ______________

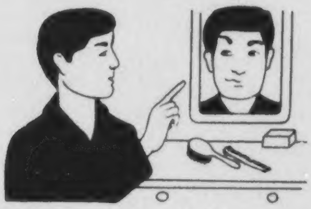
The teen years offer many opportunities to gain maturity. However, with opportunities also come obstacles. These obstacles along the road to maturity may detour or sidetrack your progress if you do not know how to cope with them. Ask yourself the following questions; rate yourself on your answers. Which of the characteristics that mature people are expected to possess do you reveal?

A mature person . . . **Usually** **Sometimes** **Never**

. . . is realistic and can face facts and see things as they are.

(NOTE: It takes courage to identify and overcome such obstacles as limited income, talents, or ability to excel in school subjects.)

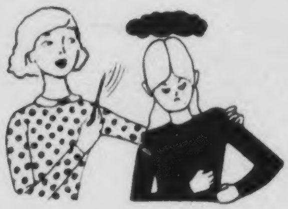
Can I face facts? ___ ___ ___



. . . takes criticism as a challenge and tries to do something constructive about it.

(NOTE: The ability to accept a reminder of your shortcomings without getting angry takes considerable self-control.)

Can I accept criticism? ___ ___ ___

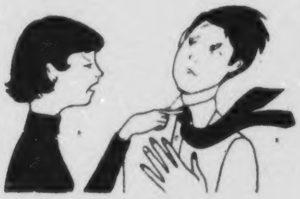


ASSIGNMENT SHEET #2

A mature person . . . **Usually** **Sometimes** **Never**

. . . takes responsibility for own actions.

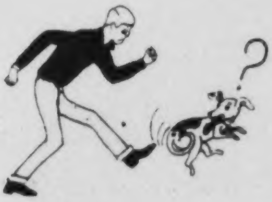
Do I put blame on others? ___ ___ ___



. . . avoids lashing out when disappointed or when unable to do what he or she wants.

(NOTE: Relationships can be seriously damaged by unreasonable anger or resentment and by blaming others for your failure.)

Do I take anger out on others? ___ ___ ___



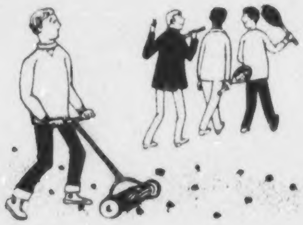
. . . avoids running from problems.

Examples: Pretending to be sick; daydreaming

Do I run from problems? ___ ___ ___

ASSIGNMENT SHEET #2

A mature person . . .	**Usually**	**Sometimes**	**Never**
. . .makes the best of poor situations.			
Can I accept disappointments?	____	____	____



HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ASSIGNMENT SHEET #3--USE STEPS TO SOLVE A PROBLEM

NAME ________________________________ SCORE ____________

Throughout your lifetime you will be faced with problems to be solved. Personal and professional problems can be effectively dealt with using the seven steps to handle a problem. Using the information within this unit, solve the problem below step by step.

In the medical office where you work you have gained seniority and are now the office manager. You are responsible for supervising the employees. After a conference with your two physicians you decide that the assistants should rotate through various areas so that they will each be prepared to work in the front office and in the clinical area in case of illness or when vacations are taken. Two of the employees agree that they would be willing to train in these areas but the other three are very hostile, and from various comments you hear this rotation will not be accepted. One woman has children who must be picked up from school exactly at 3:30 p.m. and doesn't want to stay late for clinical if patients become back up. Another woman states she feels very uncomfortable working in the clinical area. The third woman doesn't want to work in the office because she just "hates" bookkeeping. This is a common problem in offices with a number of persons working together. Follow the seven steps for solving problems and write your answers in the space provided. When you are finished discuss in class how you solved your problem.

1. Recognize the problem-- ________________________________

   ____

   ____

   ____

2. Get the facts-- ________________________________

   ____

   ____

   ____

3. Weigh the facts-- ________________________________

   ____

   ____

   ____

ASSIGNMENT SHEET #3

4. Determine the objectives--____

5. Make a decision--____

6. Take action--____

7. Check results--____

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ASSIGNMENT SHEET #4--USE DEFENSE MECHANISMS

NAME ______________________________ SCORE ____________

Defense mechanisms are used by everyone at some time in their lives, and some more frequently than others. Some are quite evident in the person's behavior and others are more difficult to identify. After each defense mechanism listed, think of a situation or an example of someone using the mechanism. Choose a partner and practice role playing the action. In class act out the behavior and have classmates try to identify each defense mechanism.

1. Denial--______________________________
2. Suppression--______________________________
3. Repression--______________________________
4. Compensation--______________________________
5. Sublimation--______________________________
6. Identification--______________________________

ASSIGNMENT SHEET #4

7. Imitation--____

8. Introjection--____

9. Rationalization--____

10. Displacement--____

11. Regression--____

12. Conversion reaction--____

13. Fantasy--____

MA - 65-C

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ASSIGNMENT SHEET #5--PRONOUNCE WORDS DISTINCTLY

NAME ________________________________ SCORE __________

1. Translate into writing the following words and phrases.

   a. Wuryagoin? ________________________________

   b. Whutimizut? ________________________________

   c. Dya wanna go widdem or widus? ________________________________

   d. Cher turn tucall, Margrut. ________________________________

   e. Wy dincha stoppim? ________________________________

   f. Watchagonnado nex Winsdy? ________________________________

   g. Ohuhdunno--probly jussidat home asuzhel. ________________________________

   h. Wenzee cumin? ________________________________

   i. Uh tole um uh din wanany. ________________________________

   j. Whidencha gidda ticket forda boxun mach? ________________________________

   k. Doncha ever unnerstan whucha read? ________________________________

   l. Uh dunno wy ya din gimme some. ________________________________

2. Read the following tongue twisters aloud. Be careful not to omit any necessary vowel or consonant sounds.

   (NOTE: You may want to record parts of this assignment sheet.)

   a. Strict strong Stephen Stringer snared slickly six silly snakes.

   b. Strange strategic statistics.

   c. Shy Sarah saw Swiss wrist watches.

   d. The sixth sheik's sixth sheep's dead.

   e. Tie the twine to three tree twigs.

   f. With which winsome witch were you whispering?

   g. Well, when Will whiffed the wild wintry wind, he whisked out his wicked whiskey.

ASSIGNMENT SHEET #5

h. At her willful whim, the whip whizzed over the wheelbarrow where Willy was whimpering.

i. Six long slim slick slender slacks slid silently to the floor.

j. Furthermore, Francis Farkwark fried fifteen fish for Francis Fambush's father.

k. She stood on the balcony, mimicking him hiccupping and welcoming him inside.

l. A snifter of snuff is not enough for the snuff sniffer to sniff.

m. Slippery sleds slide swiftly down slick streets.

n. Thomas Tattertoot took tough twine to tie ten twigs to two tall tree trunks.

o. What whim led Whitney White to whittle, whisper, and whimper near the wharf where a whale might wheel and whirl?

p. I never felt felt feel like that fine felt felt.

3. Translate the following words into writing.

a. Dese--____________________

b. Dose--____________________

c. Wen--____________________

d. Budder--____________________

e. Thoid--____________________

f. Ti-ip--____________________

g. Warsh--____________________

h. Caounty--____________________

i. Git--____________________

4. Read the following words aloud. Be careful not to omit any necessary vowel or consonant sounds.

a. Bringing

b. Picture

c. Candidate

ASSIGNMENT SHEET #5

d. Laboratory

e. Midst

f. Fifths

g. Width

h. Pitcher

i. Prairie

j. Route

k. Window

l. Creek

5. Rewrite the following sentences using correct English.

a. Bill said, "I wanna work the afternoon shift today."

____

b. John said, "We'll hafta check to see if we have that brand or not."

____

c. The employee said, "I'm gonna check to see if we can have that delivered or not."

____

d. "She coulda done that yesterday."

____

e. "Commere. I need your help," said the supervisor.

____

f. "Will you gimme a hand?"

____

g. "Doncha want dessert?" asked the waitress.

____

ASSIGNMENT SHEET #5

h. "I dunno if we have any."

____

i. "Hooja say you want to see?"

____

j. "Woncha come back again?"

____

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ASSIGNMENT SHEET #6--GIVE ORDERS, DIRECTIONS, AND INSTRUCTIONS

NAME ______________________________ SCORE ____________

1. Choose one person in the class to describe the design on the following page (Figure 1). The rest of the class should try to draw the object exactly like the original design. The participants are not allowed to see the design.

2. Repeat the activity using the second design (Figure 2), but this time allow the participants to ask questions.

3. Think of a situation on your job where you may need to give directions, orders, and/or instructions. Organize your thoughts below and then give the instructions or directions to the class. Let your classmates rate and discuss the effectiveness of your directions or instructions using the following questions.

   a. Were the directions or instructions clear? Why or why not?

   ____

   ____

   b. Were they in an order that could be followed easily if you knew nothing about the product, service, or procedure beforehand?

   ____

   ____

   c. Were there any unnecessary points made? If so, how could they be eliminated?

   ____

   ____

   d. What were the clues that the right directions or instructions were followed?

   ____

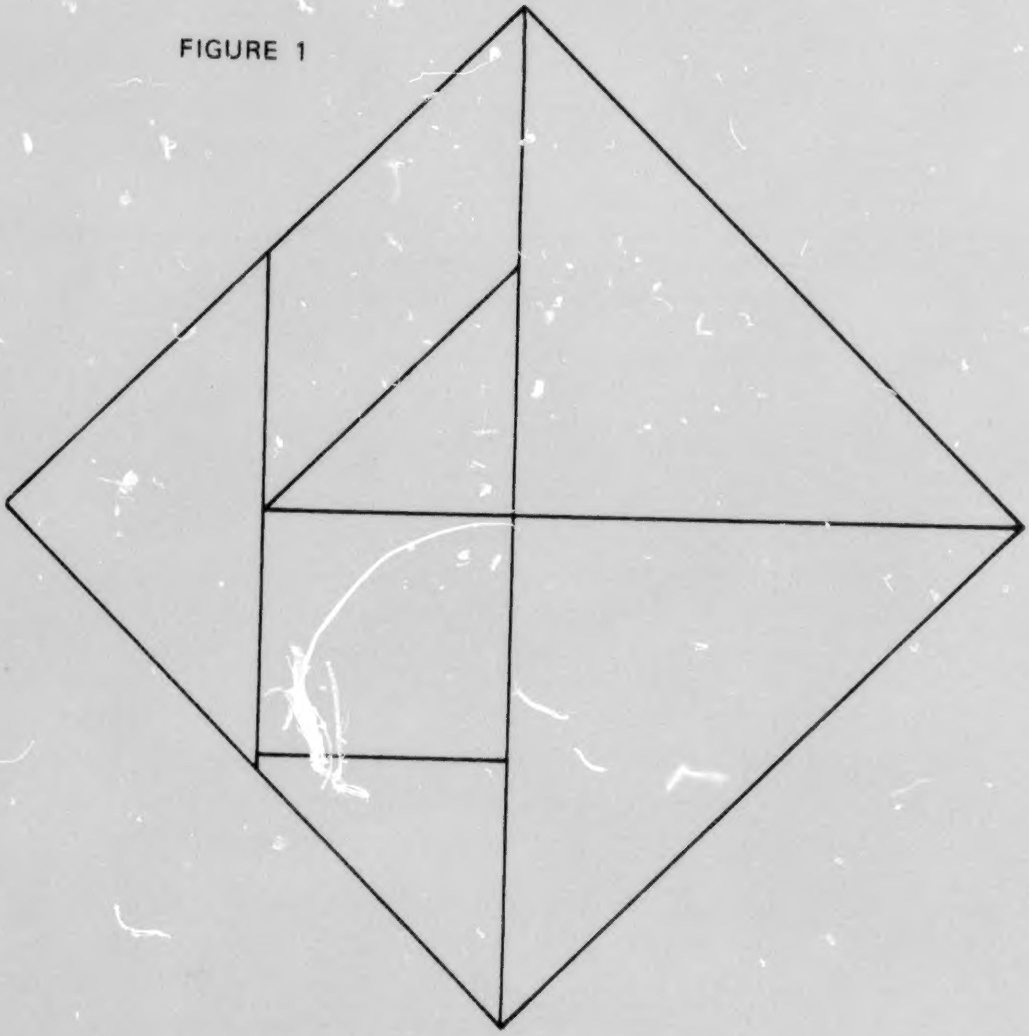
   ____

   ____

   ____

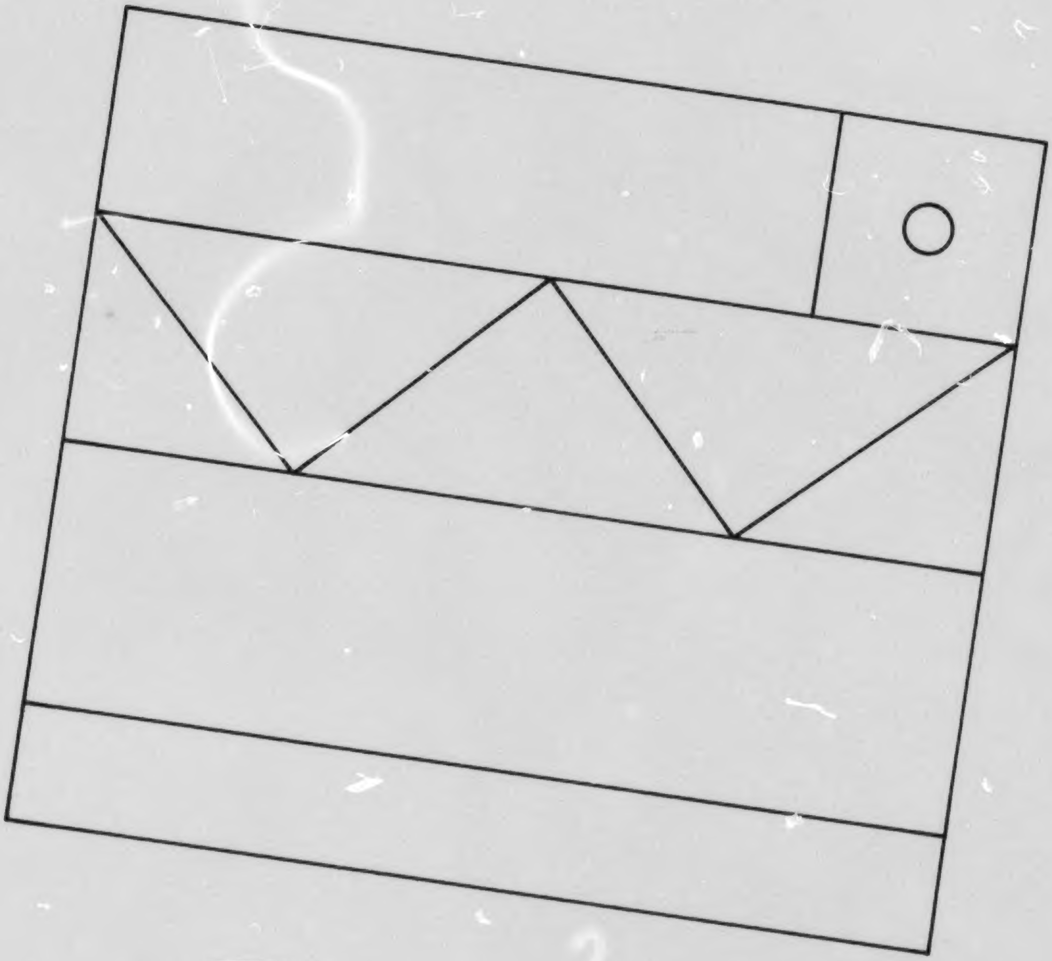
ASSIGNMENT SHEET #6

FIGURE 1



ASSIGNMENT SHEET #6

FIGURE 2



HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ASSIGNMENT SHEET #7--ANALYZE VOICE QUALITIES

NAME ______________________________ SCORE ______________

Do a tape recording of your voice. Then, listen to the tape and complete the rating below. Using the rating of your voice on tape, prepare a list of ways in which you can improve your voice. Complete the list on a separate piece of paper.

Have your classmates rate your voice, too. Check back periodically to see if there has been any noticeable progress.

	Yes	Maybe/ Sometimes	No
1. Do you speak too loudly or in a noisy manner?			
2. Do people frequently ask you to repeat a statement you have made?			
3. Do you speak in the same tone continually?			
4. Do you speak with the same volume continually?			
5. Do you speak in an artificial, unnatural, and affected voice?			
6. Is your voice high-pitched and shrill?			
7. Do you frequently speak with lungs almost empty?			
8. Do you speak in long sentences which frequently lose their meaning?			
9. Do you hiss when using certain letters (P, B, T, C, S)?			
10. Do you speak in mush tones as though you had something in your mouth?			
11. Do you use "uh" and "er-uh" frequently?			
12. Is your voice clouded and husky?			
13. Do you talk "through your nose"?			
14. Do you talk in a jerky manner?			

ASSIGNMENT SHEET #7

	Yes	Maybe/ Sometimes	No
15. Do you talk in a whining and apologetic manner?			
16. Do you talk in a dominating, dictatorial tone?			
17. Do you stammer and stutter?			
18. Do you often speak too fast or in a slow drawl?			
19. Do you mispronounce words frequently?			
20. Does your voice lose its force and expression at the end of sentences?			
21. Do you speak in a flat, dull, and colorless tone?			
22. Do you jumble up consonants, which makes your speech hard to understand?			
23. Do you use a "gushy" or "gooey" voice when talking to friends?			
24. Do you choke off sounds?			
25. Is your voice unpleasant when you laugh?			
26. Do you put the "d," "t," and "ing" on the end of words?			
27. Do you run words together?			
28. Do you have a whining voice?			
29. Do you use colloquialisms or speak with an accent?			
30. Do you have an adequate vocabulary?			
31. Do your words flow out evenly and clearly?			
32. Is your voice friendly and cordial?			
33. Can you be heard clearly in the back of the room when speaking?			
34. Do you emphasize your main thought?			

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

TEST

NAME ______________________________ SCORE ____________

1. Match terms associated with human relations and communications to the correct definitions. Place the correct numbers in the blanks provided.

   _____a. All ways meanings are conveyed from one person to another

   _____b. Five stages of emotional response of the person facing death

   _____c. Forming interpersonal relationships and developing a working rapport with others

   _____d. Behavior used to cope with difficulties

   1. Grieving response
   2. Communications
   3. Defense mechanism
   4. Human relations

2. Select from the following list ways to get along with supervisors. Mark each correct answer with an "X."

   _____a. Accept helpful corrections and attempt to learn

   _____b. Be enthusiastic about your job and willing to take on more responsibilities when asked

   _____c. Be helpful and describe how you did tasks at your former job

   _____d. Leave personal problems at home

   _____e. Admit your limitations and ask for assistance when needed

   _____f. Accept the authority of the person in charge

   _____g. Buy the supervisor little gifts occasionally

   _____h. Be dependable

3. State ways to get along with co-workers.

   a. ______________________________

   b. ______________________________

   c. ______________________________

   d. ______________________________

e. ______________________________

f. ______________________________

g. ______________________________

h. ______________________________

4. Select from the following list ways to get along with patients. Mark each correct answer with an "X."

_____a. Approach patients with self-confidence and sincerity

_____b. Never argue with patients or their families

_____c. Call the patient after hours to see how he or she is doing

_____d. Try to remember your patients' names, problems, families, and medical histories

_____e. Realize that there will always be some difficult patients

_____f. Respect each patient as a person

5. Describe ways to handle difficult persons.

a. Aggressive/amorous--______________________________

____

____

b. Complainer--______________________________

____

____

c. Combative/hostile--______________________________

____

____

d. Bossy--______________________________

____

____

e. Demanding--______________________________

____

____

6. Match defense mechanisms to the correct definitions. Place the correct numbers in the blanks provided.

______a. Voluntary exclusion of unpleasant ideas, feelings, or situations from the conscious level of thought

______b. Development of a personality trait or physical ability to overcome a real or imagined deficiency

______c. Refusal to recognize an unpleasant or anxiety producing situation

______d. Involuntary exclusion of unbearable ideas, feelings, or situations from the conscious level of thought

______e. Vicarious achievement or enjoyment through another person or group, a book, or a movie

______f. Substitution of a socially acceptable behavior for one which is not acceptable

______g. Transfer of feelings from one situation or person to another

______h. Conscious copying of the actions of others

______i. Conscious or unconscious justification of a thought or action

______j. Emotional conflict expressed as a physical symptom

______k. Return to an earlier, more comfortable level of development either consciously or unconsciously

______l. Unconscious process whereby a quality or attribute of another is taken and made a part of the personality

______m. Conscious distortion of unconscious wishes or needs

1. Denial
2. Suppression
3. Compensation
4. Repression
5. Conversion reaction
6. Rationalization
7. Fantasy
8. Imitation
9. Identification
10. Sublimation
11. Regression
12. Introjection
13. Displacement

7. Arrange in order steps in problem solving. Place the correct numbers in the blanks provided.

______a. Get the facts

______b. Check results

______c. Determine the objectives

______d. Recognize the problem

______e. Take action

______f. Make a decision

______g. Weigh the facts

8. Select from the following list ways to improve communications skills. Mark each correct answer with an "X."

______a. Get the listener's attention and interest

______b. Use questions wisely

______c. Talk about yourself to make person feel comfortable

______d. Avoid the use of technical terms unless you know listener is familiar with them

______e. Talk about only one subject at a time and relate all comments to that theme

______f. Speak distinctly

______g. Encourage the listener to ask questions and participate

______h. Think before responding to questions

______i. Plan what you are going to say in advance for times when you must convince someone or explain something

9. Describe important factors to consider when using non-verbal gestures.

____

____

____

____

____

____

____

____

____

10. Describe care and treatment of terminally ill patients and their families.

    a. ______________________________

    ____

    b. ______________________________

    ____

    c. ______________________________

    ____

    d. ______________________________

    ____

    e. ______________________________

    ____

11. Complete self-analysis.

12. Determine personal maturity in coping with problems.

13. Use steps to solve a problem.

14. Use defense mechanisms.

15. Pronounce words distinctly.

16. Give orders, directions, and instructions.

17. Analyze voice qualities.

(NOTE: If activities 11-17 have not been finished before the test, ask your instructor when they should be completed.)

HUMAN RELATIONS AND COMMUNICATIONS
UNIT II

ANSWERS TO TEST

1. a. 2
   b. 1
   c. 4
   d. 3
2. a, b, d, e, f, h
3. a. Know all co-workers by name
   b. Introduce yourself to other employees when you begin job
   c. Be cordial and speak to other employees
   d. Listen, ask questions, and thank other employees who are training you
   e. Do not gossip about patients, workers, supervisors, or employers
   f. Work out personality differences among those affected, or take problems to supervisor, if necessary
   g. Be considerate of others' feelings and property
   h. Develop open communication and good listening habits
4. a, b, d, e, f
5. Descriptions should include:
   a. 1) Be very professional when any suggestions or overtures are made
      2) Try to ignore remarks or actions that are really aggressive
   b. 1) Counteract comments with cheerful positive statement
      2) Do not complain to others in the office, as it tends to be contagious
   c. 1) Determine cause of problem
      2) Be calm but firm
      3) Get assistance if needed
   d. 1) Avoid conflict with a person who is not your supervisor
      2) Pay attention to details and follow directions as accurately as possible

e. 1) Be tactful but stand firm on what you need to do

2) Try to meet some of demands

6. a. 2

b. 3

c. 1

d. 4

e. 9

f. 10

g. 13

h. 8

i. 6

j. 5

k. 11

l. 12

m. 7

7. a. 2

b. 7

c. 4

d. 1

e. 6

f. 5

g. 3

8. a, b, d, e, f, g, h, i

9. Description should include:

a. Patients are very sensitive to their surroundings when they are nervous and anxious

b. Health care workers must be very careful how they communicate with patients and among themselves

c. A non-verbal gesture can mean one thing to you and another to someone else

d. Think before you use any non-verbal gestures

10. a. Allow patient and family to express their feelings and ask questions

b. Answer questions as honestly as possible or talk with the physician about the concerns that need to be dealt with

c. Find out what the patient knows about his or her illness before care is given

d. Help the patient to maintain dignity and work through the illness especially if there is a physical deformity or loss of function of a body part

e. Encourage patient to continue all follow-up care, and explain all treatment before it takes place

11. Evaluated to the satisfaction of the instructor
12. Evaluated to the satisfaction of the instructor
13. Evaluated to the satisfaction of the instructor
14. Evaluated to the satisfaction of the instructor
15. Evaluated to the satisfaction of the instructor
16. Evaluated to the satisfaction of the instructor
17. Evaluated to the satisfaction of the instructor

MEDICAL LAW AND ETHICS
UNIT III

UNIT OBJECTIVE

After completion of this unit, the student should be able to use knowledge of medical laws and ethics to better protect patients, physicians, and the practice of the medical assistant. The student should also be able to use judgment in handling all matters that deal with ethical behavior with legal implications. This knowledge will be evidenced through completion of assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit the student should be able to:

1. Match terms associated with medical law and ethics to the correct definitions.
2. State reasons for loss of employment in a medical office.
3. List types of patients who need special consent for treatment.
4. Select from a list common types of legal forms used in a medical office.
5. Describe termination of patient care by patient and physician.
6. Match types of torts to the correct definitions.
7. Select from a list situations in which the physician is required by law to reveal information about patients.
8. Describe care of patients' charts as legal documents.
9. Discuss the "Good Samaritan" law.
10. Select from a list principles that reflect good medical ethics.
11. Describe characteristics of the ethical medical assistant.
12. Interpret the Oath of Hippocrates for the medical assistant.
13. React to issues concerning ethical behavior and medical laws.

MEDICAL LAW AND ETHICS
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide student with objective sheet.

   B. Provide student with information and assignment sheets.

   C. Discuss unit and specific objectives.

   D. Invite attorney to discuss legal documents and problems that can occur in medical office practice.

   E. Contact the state medical association for current information dealing with legal implications for the medical profession.

   F. Take student to an open hearing or board hearing on medical practice cases.

   (NOTE: This should stress to student the importance of honesty, ethics, and the medical chart as a legal document.)

   G. Obtain creeds and oaths of other professions and read to class and discuss.

   H. Read and discuss Patient's Bill of Rights.

   I. After students complete Assignment Sheet #1, read in class and discuss the importance of having and believing in a code of ethics.

   J. Roleplay and discuss ways issues in Assigment Sheet #2 can be handled.

   K. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Assignment sheets

      1. Assignment Sheet #1–Interpret the Oath of Hippocrates for the Medical Assistant

      2. Assignment Sheet #2–React to Issues Concerning Ethical Behavior and Medical Laws

   D. Test

   E. Answers to test

III. Unit references:

A. Cooper, Marian G., and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

B. Black, Henry Campbell. *Black's Law Dictionary*. St. Paul, Minnesota: West Publishing Company, 1979.

IV. Filmstrips:

A. "The Nurse, Ethics, and the Law: Negligence and Malpractice." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

B. "The Nurse, Ethics, and the Law: Informed Consent." Available from Trainex Corporation.

THE PATIENT'S BILL OF RIGHTS

The Patient's Bill of Rights has been affirmed by the American Hospital Association. In its statement AHA voiced "the expectation that observance of these rights will contribute to more effective patient care and greater satisfaction for the patient. . ." It is not binding on AHA member hospitals, or any other, but the experiences in the past have shown that most hospitals have made an effort to honor these rights--especially when a patient indicates that she or he is very much aware of them. The Patient's Bill of Rights provides that:

1. A patient has the right to considerate and respectful care.
2. A patient has the right to obtain complete current information concerning his or her diagnosis, treatment and prognosis. If the doctor believes it medically inadvisable to give information to the patient, it must be made available to an appropriate representative of the patient. Name of doctor must be made available upon request.
3. A patient has the right to receive information necessary to give his or her informed consent prior to the start of any procedure or treatment, and to information regarding alternative procedures or treatments available.
4. A patient has the right to refuse treatment to the extent permitted under law and if he or she is fully informed of the medical consequences of refusal.
5. A patient has the right to privacy concerning his or her medical-care program. Those not directly involved in his or her care must have his or her permission to be present during case discussions, examinations or treatments.
6. A patient has the right to confidential treatment of all records pertaining to his or her care.
7. A patient has the right to reasonable response to his or her request for services. If transfer to another facility is recommended by the doctor, this patient must be given full information and explanation of need for transfer, and any possible alternatives.
8. A patient has the right to know the relationship between his or her hospital and any other health-care institutions involved in his or her care.
9. A patient has the right to be informed of any hospital plan to engage in human experimentation affecting his or her care or treatment, and to refuse to participate in such research projects.
10. A patient has the right to expect reasonable continuity of care, and to be informed of continuing health-care requirements after discharge from the hospital.
11. A patient has the right to examine his or her bill and receive an explanation of all or any charges, regardless of method of payment.
12. A patient has the right to be informed of any hospital rules or regulations that relate to his or her conduct as a patient.

MEDICAL LAW AND ETHICS
UNIT III

INFORMATION SHEET

I. Terms and definitions

A. Abandonment--Withdrawal of a physician from the care of a patient without reasonable notice

B. Confidential--A relation of trust

C. Damages--Money awarded for injuries caused by another person

D. Ethics--Standards of professional conduct

E. Felony--Serious offense, such as murder or burglary

F. Implied contract--Inferred verbal agreement; legally binding with understood implications

Example: Patient makes appointment, physician agrees to see, diagnose and treat problem; an implied contract is made and patient is expected to pay for services

G. Libel--Accusation in writing or print against the character of a person, affecting his/her reputation

H. License--Official permit giving a person the right to practice a profession

I. Malpractice--Negligence that results in injury of a patient

J. Medical-practice acts--Guidelines that define medical practice, list qualifications (both personal and educational), outline steps to obtain a license and create a board to administer laws

(NOTE: These Acts also define inappropriate behavior and can be the deciding factor in revoking a license.)

K. Negligence--Failure to exercise reasonable care

L. Privileged communication--Communication made between persons, in professional confidence, which may not be divulged

Examples: Patient to physician; client to lawyer

M. Slander--Oral words that are malicious and false that injure another person's reputation

INFORMATION SHEET

N. Statute of limitations--Law declaring that no suit can be maintained on such causes of action unless brought within a specified period of time

(NOTE: This law might make a difference in the amount of time charts are kept in a medical office. Usually there is a period of time after an incident occurs that a suit can be brought against the accused.)

O. Tort--Private or civil wrongs or injuries distinguished from other crimes

Examples: Assault and battery; minor car accidents

II. Reasons for loss of employment in a medical office

A. Conviction of a serious crime

Examples: Felonies, murder, armed robbery

B. Conviction of lesser crimes when moral conduct is involved

Examples: Selling or abusing drugs; prostitution

C. Incapability to practice because of insanity, drug use or excessive intoxication

D. Unprofessional conduct

Examples: Giving false or deceptive promises of treatment; removing patient's charts from office

E. Unethical acts

Examples: Removing prescription pads from office; dishonesty in keeping records; pilfering petty cash

III. Types of patients who need special consent for treatment

(NOTE: It is imperative that you follow the directions of the physician if treatment is to be given in the following cases. You must know your limits and understand the consequences of your actions.)

A. Emergencies

Example: Consent is understood for unconscious or seriously injured patient who needs immediate care

B. Minors

(NOTE: Consent from minors differs from state to state. In some cases, minors who are married, have a dependent child, have been married, or who are unmarried and pregnant, may give consent. A minor who is separated from his/her parents or legal guardian, and is self-supporting, may give consent. Check your state laws concerning treatment of minors.)

INFORMATION SHEET

C. Incompetents

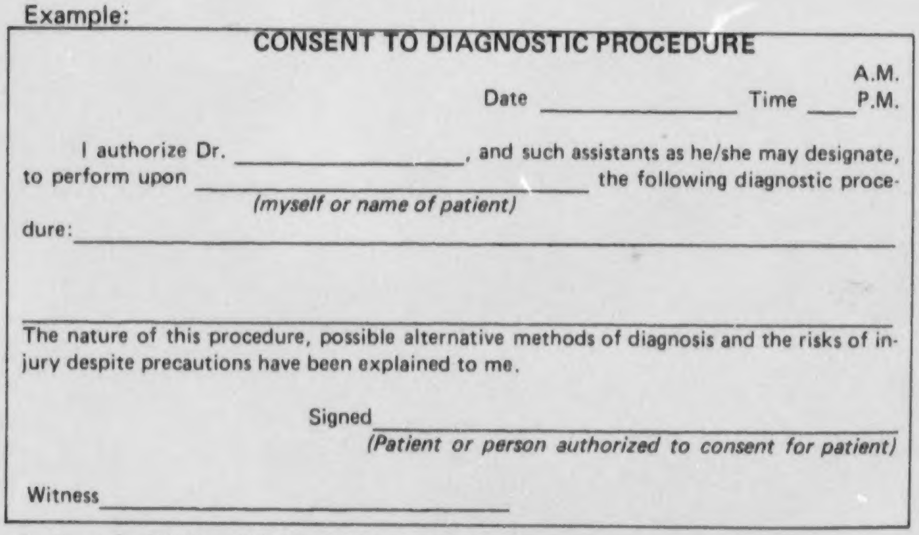
Example: When patient is not mentally capable of making a decision, the consent of a guardian is required

IV. Common types of legal forms used in a medical office

(NOTE: These forms provide a safeguard for the patient, physician, and the MA. They document agreements that could have ethical and legal implications.)

A. Consent to diagnostic procedures

Example:



CONSENT TO DIAGNOSTIC PROCEDURE

Date ______________ Time ____ A.M. P.M.

I authorize Dr. ______________, and such assistants as he/she may designate, to perform upon ______________ *(myself or name of patient)* the following diagnostic procedure: ______________________________

____

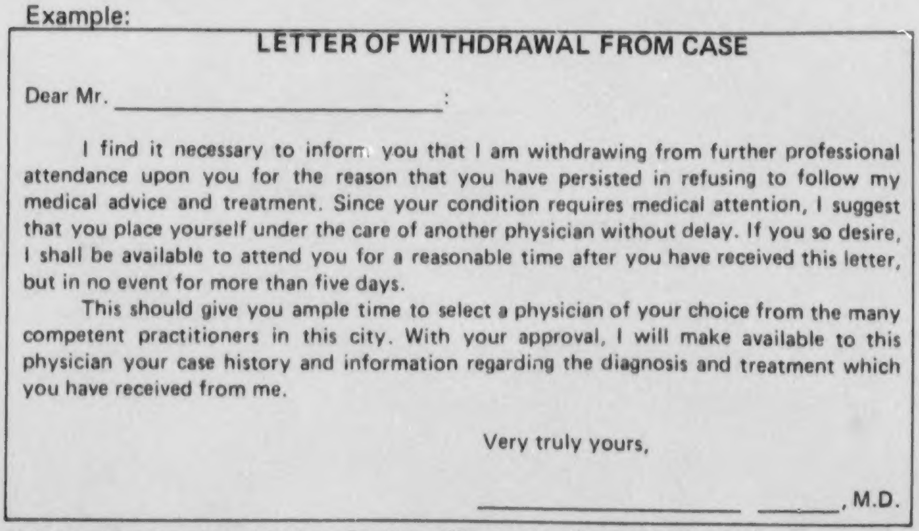
The nature of this procedure, possible alternative methods of diagnosis and the risks of injury despite precautions have been explained to me.

Signed ______________________________
(Patient or person authorized to consent for patient)

Witness ______________________________

B. Letter of withdrawal from case

Example:



LETTER OF WITHDRAWAL FROM CASE

Dear Mr. ______________________:

I find it necessary to inform you that I am withdrawing from further professional attendance upon you for the reason that you have persisted in refusing to follow my medical advice and treatment. Since your condition requires medical attention, I suggest that you place yourself under the care of another physician without delay. If you so desire, I shall be available to attend you for a reasonable time after you have received this letter, but in no event for more than five days.

This should give you ample time to select a physician of your choice from the many competent practitioners in this city. With your approval, I will make available to this physician your case history and information regarding the diagnosis and treatment which you have received from me.

Very truly yours,

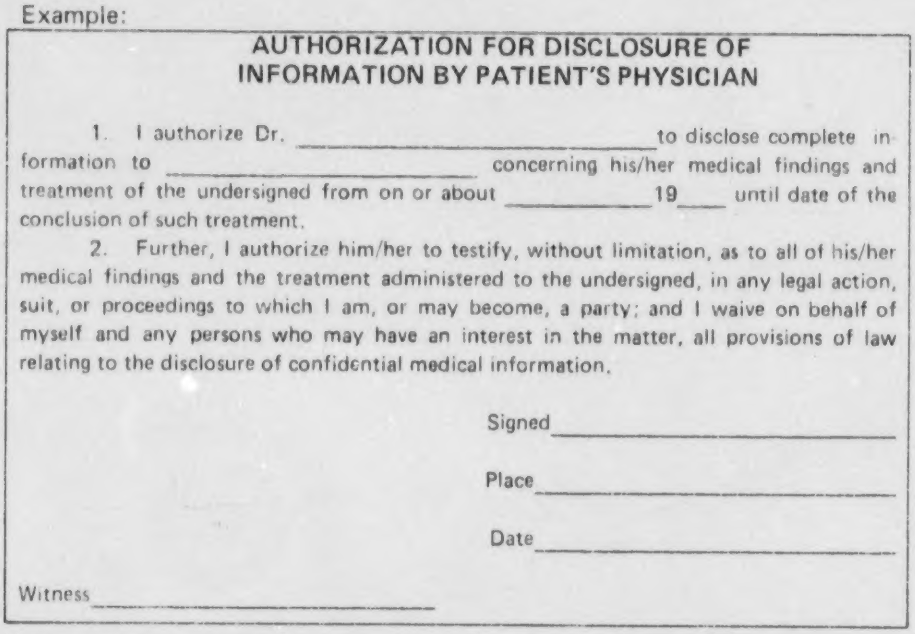
______________ ______, M.D.

Medicolegal Forms with Legal Analysis, Copyright 1973, American Medical Association.

INFORMATION SHEET

C. Authorization for disclosure of information by patient's physician

Example:



AUTHORIZATION FOR DISCLOSURE OF INFORMATION BY PATIENT'S PHYSICIAN

1. I authorize Dr. ______________________________ to disclose complete information to __________________________ concerning his/her medical findings and treatment of the undersigned from on or about ____________ 19____ until date of the conclusion of such treatment.

2. Further, I authorize him/her to testify, without limitation, as to all of his/her medical findings and the treatment administered to the undersigned, in any legal action, suit, or proceedings to which I am, or may become, a party; and I waive on behalf of myself and any persons who may have an interest in the matter, all provisions of law relating to the disclosure of confidential medical information.

Signed ____________________________

Place ______________________________

Date ______________________________

Witness ____________________________

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INFORMATION SHEET

D. Consent to operation, anesthetics, and other medical services

Example:

CONSENT TO OPERATION, ANESTHETICS, AND OTHER MEDICAL SERVICES

A.M.
Date ____________________ Time ______ P.M.

1. I authorize the performance upon ______________________________
(myself or name of patient)

of the following operation ______________________________
(state nature and extent of operation)

to be performed by or under the direction of Dr. ______________________________.

2. I consent to the performance of operations and procedures in addition to or different from those now contemplated, whether or not arising from presently unforeseen conditions, which the above-named doctor or his associates or assistants may consider necessary or advisable in the course of the operation.

3. I consent to the administration of such anesthetics as may be considered necessary or advisable by the physician responsible for this service, with the exception of

______________________________.
(state "none," "spinal anesthesia," etc.)

4. The nature and purpose of the operation, possible alternative methods of treatment, the risks involved, the possible consequences, and the possiblity of complications have been explained to me by Dr. ______________________________ and

by ______________________________.

5. I acknowledge that no guarantee or assurance has been given by anyone as to the results that may be obtained.

6. I consent to the photographing or televising of the operations or procedures to be performed, including appropriate portions of my body, for medical, scientific or educational purposes, provided my identity is not revealed by the pictures or by descriptive texts accompanying them.

7. For the purpose of advancing medical education, I consent to the admittance of observers to the operating room.

8. I consent to the disposal by hospital authorities of any tissues or body parts which may be removed.

9. I am aware that sterility may result from this operation. I know that a sterile person is incapable of becoming a parent.

10. I acknowledge that all blank spaces on this document have been either completed or crossed off prior to my signing.

(CROSS OUT ANY PARAGRAPHS ABOVE
WHICH DO NOT APPLY)

Signed ______________________________
(Patient or person authorized to consent for patient)

Witness ____________________

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INFORMATION SHEET

E. Request for sterilization

(NOTE: This form is a legal formality in many states but may not be used in some areas.)

Example:

REQUEST FOR STERILIZATION

Date ________________ Time ____________ A.M. P.M.

We, the undersigned husband and wife, each being more than twenty-one years of age and of sound mind, request Dr. ________________________________, and assistants of his choice, to perform upon ________________________________
(name of patient)
the following operation: ________________________________
(state nature and extent of operation)

It has been explained to us that this operation is intended to result in sterility although this result has not been guaranteed. We understand that a sterile person is NOT capable of becoming a parent.

An abortion is not a crime when performed for therapeutic purposes, that is, when it is necessary to save the life or to preserve the health of the patient. The physician should be in a position to establish the therapeutic grounds upon which he/she justifies action. In order to best protect himself/herself in this regard, he/she should obtain and preserve in his/her file a statement such as the above, signed by at least three reputable physicians (including himself/herself) that they have examined the patient and are of the opinion that an abortion is a medical necessity. Section 2223 (2) of the Mississippi Code (Supp. 1954) is as follows: "No act prohibited in section 1 hereof (which makes criminal the performance of a non-therapeutic abortion) shall be considered as necessary for the preservation of the mother's life unless upon the prior advice in writing, of two reputable licensed physicians." The concurrence of two reputable physicians to establish the therapeutic necessity of the abortion is also required under the following statutes: N.H. REV. STAT. ANN. c 585, 13 (1955); N.M. STAT. ANN. 40-3-2 (1953); OHIO REV. CODE tit. 29, 2901.16 (Baldwin, 1953). See also Nash v. Meyer, 54 Idaho 283, 31 P. 2d 273 (1934).

If the patient is able to do so, it is desirable that she/he set forth the history of his/her condition in her/his own words and handwriting in the space provided therefor.

It is desirable that the patient's husband/wife, or if he/she is not married, a parent, sign as a witness.

This form is intended to be used where the primary purpose rather than the incidental result is sterilization.

We voluntarily request the operation and understand that if it proves successful the results will be permanent and it will thereafter be physically impossible for the patient to inseminate, or to conceive or bear children.

Signed ________________________________
(Husband)

Signed ________________________________
(Wife)

Witness ________________________________

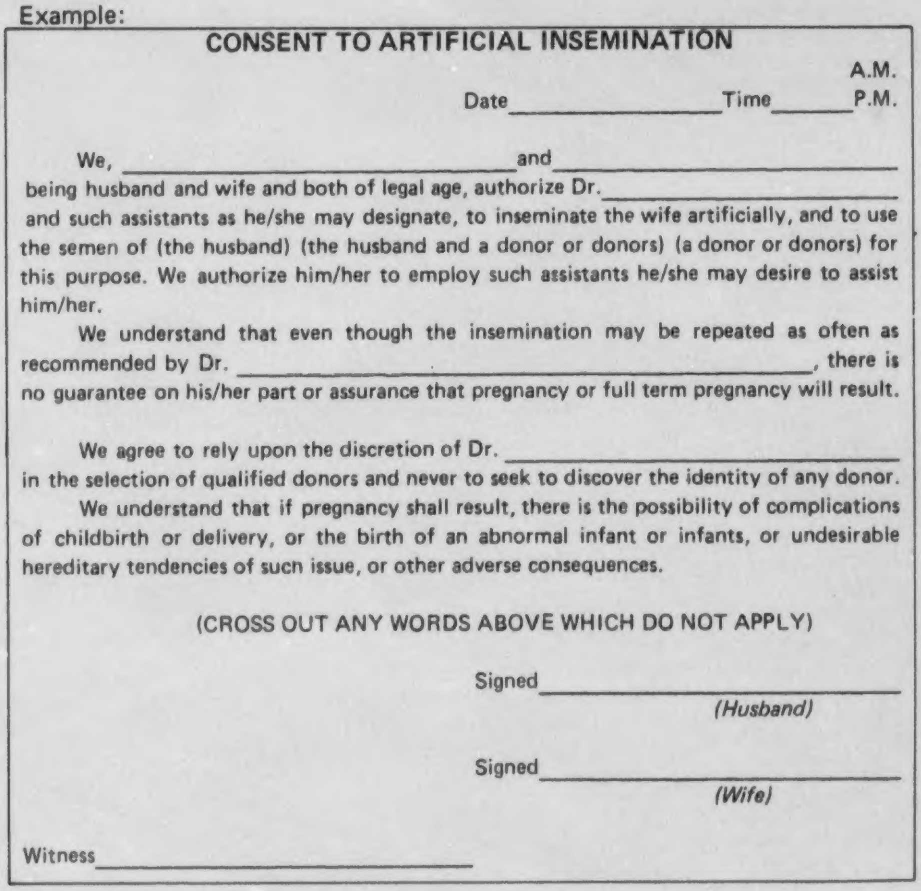
Medicolegal Forms with Legal Analysis, Copyright 1973, American Medical Association.

MA - 97-C

INFORMATION SHEET

F. Consent to artificial insemination

Example:



CONSENT TO ARTIFICIAL INSEMINATION

Date________________ Time______ A.M. P.M.

We, ________________________ and ________________________ being husband and wife and both of legal age, authorize Dr.____________________ and such assistants as he/she may designate, to inseminate the wife artificially, and to use the semen of (the husband) (the husband and a donor or donors) (a donor or donors) for this purpose. We authorize him/her to employ such assistants he/she may desire to assist him/her.

We understand that even though the insemination may be repeated as often as recommended by Dr. ______________________________, there is no guarantee on his/her part or assurance that pregnancy or full term pregnancy will result.

We agree to rely upon the discretion of Dr. ________________________ in the selection of qualified donors and never to seek to discover the identity of any donor.

We understand that if pregnancy shall result, there is the possibility of complications of childbirth or delivery, or the birth of an abnormal infant or infants, or undesirable hereditary tendencies of such issue, or other adverse consequences.

(CROSS OUT ANY WORDS ABOVE WHICH DO NOT APPLY)

Signed________________________
(Husband)

Signed________________________
(Wife)

Witness________________________

Medicolegal Forms with Legal Analysis, Copyright 1973, American Medical Association.

INFORMATION SHEET

V. Termination of patient care by patient and physician

   A. Patient--May dismiss the physician at any time without notice

      (NOTE: The patient who leaves the hospital against the physician's advice, or fails to continue treatment or keep appointments may be asked to sign a letter from the physician withdrawing from case.)

   B. Physician--May not stop providing care for patient until dismissed by patient or until physician withdraws from case

VI. Types of torts

   A. Assault--Testing or treatment administered without proper consent

   B. Defamation--False statements, written or spoken, that cause a person to be ridiculed or suffer damage to reputation

      (NOTE: Medical assistants should make sure that any medical communications are entirely correct and confidential.)

   C. Invasion of privacy--Results when information about patient is revealed or published, even if true, and patient suffers mental pain and distress; can also result when patient is physically exposed when not necessary

      (NOTE: Before any information is given to anyone, the physician must be checked with first.)

VII. Situations in which the physician is required by law to reveal information about patients

   A. Birth certificates

   B. Death certificates

   C. Reports of certain diseases

      Examples: Typhoid fever, venereal diseases, tuberculosis

   D. Reports of injury from violence

      (NOTE: In some states it is not necessary to report gunshot wounds, stab wounds or other injuries resulting from violence, unless patient dies; other states require reporting of treatment.)

   E. Child abuse

   F. Drug control

INFORMATION SHEET

VIII. Care of patients' charts as legal documents

A. Corrections

1. Never try to erase or blot out mistakes

2. Draw line through error, then put in correction with date and initials of person making entry

u 100 given sub Q 4-28-00 JNX
Example: Regular insulin 20 units of ~~u 80 given IM~~

B. Retention

1. Length of time charts are kept varies from state to state

(NOTE: Some states require that charts be kept less than 1 year, others 2 years.)

2. May be microfilmed to save space

3. Charts to be destroyed are burned or shredded

C. Ownership

1. Medical records and X-rays legally belong to the physician

2. X-rays and copies of records can be made and sent to another physician

3. If patient is insistent, records can be copied and given to patient

(NOTE: Legally, patients' charts and x-rays are products of the physician, and should remain in the office. The information on the charts may be reproduced for the patient if necessary.)

IX. "Good Samaritan" law--One who sees a person in danger through negligence of another cannot be charged with negligence in risking his/her own life or serious injury in attempting to assist or rescue that person providing the attempt is not reckless or rash

X. Principles that reflect good medical ethics (Assignment Sheet #1)

A. Work of another doctor is never criticized in front of a patient

Example: Dr. Quack sure did a poor job of setting this bone

INFORMATION SHEET

B. Physicians should not advertise their practice to attract patients

(NOTE: This practice may be acceptable in some states, depending on laws.)

Example: Special on tonsillectomies--two for one price

C. A referred patient is treated only for the condition for which he or she was sent to the physician

D. Physicians who call in another physician for consultation should not pay any of collected fee to that physician

E. A physician should not treat a condition that is being treated by another physician

F. Conversation and information in a medical office are confidential and must be kept "in house!"

(NOTE: Gossiping about patients, other workers, or physicians could result in a lawsuit, so please leave all your work behind you when you leave the office.)

XI. Characteristics of the ethical medical assistant (Assignment Sheet #2)

(NOTE: Ethical behavior for each individual is based on that person's concept of right and wrong and the values they have learned throughout life. In the health profession ethical behavior is probably the one characteristic that is stressed as absolutely necessary because of the strong legal implications involved.)

A. Has strong sense of right and wrong

B. Keeps all confidences

C. Familiar with enforced laws dealing with medical profession

D. Practices the "Golden Rule"

(NOTE: Put yourself or loved one in that patient's place and do unto others as you would have them do unto you. In other words, before you speak or act, put yourself in the place of that person.)

E. Shows pride in profession

MEDICAL LAW AND ETHICS
UNIT III

ASSIGNMENT SHEET #1--INTERPRET THE OATH OF HIPPOCRATES FOR THE MEDICAL ASSISTANT

NAME____________________________________ SCORE____________

The Oath of Hippocrates dates back to the fifth century B.C. and was written by a Greek physician named Hippocrates. This oath is taken by the physician who practices medicine. Even though some of the phrases and words are quite dated, they still have profound meaning for all persons in the health field. Read the Oath, think through the words and then answer the questions that follow. Share your answers and your feelings about your own code of ethics with class.

THE OATH OF HIPPOCRATES

> I swear by Apollo the physician, and Aesculapius, and Health, and Allheal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and stipulation, to reckon him who taught me this art equally dear to me as my parents, to share my substance with him and relieve his necessities if required; to regard his offspring as on the same footing with my own brothers, and to teach them this art if they should wish to learn it without fee or stipulation and that by precept, lecture, and every mode of instruction, I will impart a knowledge of the art to my own sons, and to those of my teachers, and to disciples bound by a stipulation and oath, according to the law of medicine, but to none others.
>
> I will follow that method of treatment which, according to my ability and judgment, I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to anyone if asked not suggest any such counsel furthermore, I will not give to a woman an instrument to produce abortion.
>
> With purity and with holiness I will pass my life and practice my art.
>
> I will not cut a person who is suffering with a stone, but will leave this to be done by practitioners of this work into whatever houses I enter I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption and further from the seduction of females or males, bond or free.
>
> Whatever, in connection with my professional practice, or not in connection with it, I may see or hear in the lives of men which ought not to be spoken abroad. I will not divulge as reckoning that all such should be kept secret.
>
> While I continue to keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art, respected by all men at all times, but should I trespass and violate this oath may the reverse be my lot.

ASSIGNMENT SHEET #1

1. What statements in the Oath relate directly to issues that you might face? What meaning do they have for you?

2. Do you feel that some of the statements are outdated? ______________________

3. Do you agree with all of the statements in the Oath? ______________________

ASSIGNMENT SHEET #1

4. Write your own code of ethics--

MEDICAL LAW AND ETHICS
UNIT III

ASSIGNMENT SHEET #2--REACT TO ISSUES CONCERNING ETHICAL BEHAVIOR AND MEDICAL LAWS

NAME____ SCORE______________

As a Medical Assistant you reflect an image of your office. How you react in various situations dealing with ethical behavior and medical law will be important legally and in setting conduct standards. Discuss or roleplay the following scenes. What guidelines will you follow in dealing with these issues?

1. Handling prying patients can be exasperating. For instance:
   a. I saw them bring back the biopsy report on Mr. Edwards. I hope nothing is seriously wrong.
   b. Dr. Gorgeous is single, isn't he?
   c. Isn't that a new oil painting? Dr. Flush must be doing a good business to be able to afford all these expensive furnishings.
   d. Didn't I see Mary Jane come out of this office crying? I hope the doctor didn't give her bad news or anything.
   e. Mr. Barker is so poor he uses food stamps and gets a welfare check each month. How does he pay his bill here?
2. You are in charge of keeping clinical supplies inventoried and stocked. You notice that some of the samples of antibiotics are missing and the next day one of the office workers is seen putting two packets of the capsules in her purse. How would you approach this person?
3. At a party, you overhear one of the medical assistants who works with your physician's associate talking about a patient who had had surgery performed to remove an abdominal tumor and found that it was a pregnancy instead.
4. A mother brings a child to the office for treatment and as you assist in examining the injury, you note other older injuries that appear as if the child has been abused in the past.
5. A man walks into your office around closing time and demands to be treated. There is a dark blood stain on his shirt and he is quite pale and nervous. He admits there has been a disagreement and he has been stabbed with a knife.
6. Another physician's office calls you to obtain information about a patient that has been seen in your office. The MA wants to know if the patient had a positive VDRL run in the last few months.
7. Your physician is out of town for a few days and you are at the office catching up on paper work. The hospital calls to inform you that one of the patients assigned to your physician is threatening to leave the hospital against medical advice.

MEDICAL LAW AND ETHICS
UNIT III

TEST

NAME______________________________ SCORE__________

1. Match terms associated with medical law and ethics to the correct definitions. Write the correct numbers in the blanks provided.

______a. Money awarded for injuries caused by another person

______b. Withdrawal of a physician from the care of a patient without reasonable notice

______c. Private or civil wrongs or injuries distinguished from other crimes

______d. Serious offense, such as murder or burglary

______e. Guidelines that define medical practice, list qualifications (both personal and educational), outline steps to obtain a license and create a board to administer laws

______f. Negligence that results in injury of a patient

______g. Official permit giving a person the right to practice a profession

______h. Standards of professional conduct

______i. Failure to exercise reasonable care

______j. A relation of trust

______k. Communication made between persons, in professional confidence, which may not be divulged

______l. Oral words that are malicious and false that injure another person's reputation

______m. Inferred verbal agreement; legally binding with understood implications

______n. Accusation in writing or print, against the character of a person, affecting his/her reputation

______o. Law declaring that no suit can be maintained on such causes of action unless brought within a specified period of time

1. Medical-practice acts
2. Malpractice
3. Tort
4. Ethics
5. Damages
6. Felony
7. Abandonment
8. License
9. Confidential
10. Negligence
11. Privileged communication
12. Libel
13. Slander
14. Implied contract
15. Statute of limitations

2. State reasons for loss of employment in a medical office.

   a. ______________________________

   b. ______________________________

   c. ______________________________

   d. ______________________________

   e. ______________________________

3. List types of patients who need special consent for treatment.

   a. ______________________________

   b. ______________________________

   c. ______________________________

4. Select from the following list common types of legal forms used in a medical office. Mark each correct answer with an "X."

   ______a. Letter of withdrawal from case

   ______b. Consent to operation, anesthetics, and other medical services

   ______c. Request for sterilization

   ______d. Consent to artificial insemination

   ______e. Authorization for disclosure of information by patient's physician

   ______f. Consent to diagnostic procedures

5. Describe termination of patient care by patient and physician.

   a. Patient--______________________________

   ____

   ____

   ____

   b. Physician--______________________________

   ____

   ____

   ____

6. Match types of torts to the correct definitions. Write the correct numbers in the blanks provided.

   ______a. False statements, written or spoken, that cause a person to be ridiculed or suffer damage to reputation

   ______b. Testing or treatment administered without proper consent

   ______c. Results when information about patient is revealed or published, even if true, and patient suffers mental pain and distress; can also result when patient is physically exposed when not necessary

   1. Assault
   2. Defamation
   3. Invasion of privacy

7. Select from the following list situations in which the physician is required by law to reveal information about patients. Mark each correct answer with an "X."

   ______a. Alcoholism

   ______b. Reports of injury from violence

   ______c. Reports of certain diseases

   ______d. Pathology reports

   ______e. Drug control

   ______f. Birth certificates

   ______g. Child abuse

   ______h. Birth certificates

8. Describe care of patients' charts as legal documents.

   a. Corrections--____

   ____

   ____

   b. Retention--____

   ____

   ____

   c. Ownership--____

   ____

   ____

9. Discuss the "Good Samaritan" law.

____

____

____

10. Select from the following list principles that reflect good medical ethics. Mark each correct answer with an "X."

_____a. Physicians who call in another physician for consultation should not pay any of collected fee to that physician

_____b. Physicians should not advertise their practice to attract patients

_____c. Work of another doctor is never criticized in front of a patient

_____d. A physician should not treat a condition that is being treated by another physician

_____e. A referred patient is treated only for the condition for which he or she was sent to the physician

11. Describe four characteristics of the ethical medical assistant.

a. ____

b. ____

c. ____

d. ____

12. Interpret the Oath of Hippocrates for the medical assistant.

13. React to issues concerning ethical behavior and medical laws.

(NOTE: If activities 12 and 13 have not been finished before the test, ask your instructor when they should be completed.)

MEDICAL LAW AND ETHICS
UNIT III

ANSWERS TO TEST

1.	a.	5	f.	2	k.	11
	b.	7	g.	8	l.	13
	c.	3	h.	4	m.	14
	d.	6	i.	10	n.	12
	e.	1	j.	9	o.	15

2. a. Conviction of a serious crime

   b. Conviction of lesser crimes when moral conduct is involved

   c. Incapability to practice because of insanity, drug use, or excessive intoxication

   d. Unprofessional conduct

   e. Unethical acts

3. a. Emergencies

   b. Minors

   c. Incompetents

4. a, b, c, d, e, f

5. Descriptions should include:

   a. May dismiss the physician at any time without notice

   b. May not stop providing care for patient until dismissed by patient or until physician withdraws from case

6. a. 2

   b. 1

   c. 3

7. b, c, e, f, g, h

8. Descriptions should include:
   - a.
     1) Never try to erase or blot out mistakes
     2) Draw line through error, then put in correction with date and initials of person making entry
   - b.
     1) Length of time charts are kept varies from state to state
     2) May be microfilmed to save space
     3) Charts to be destroyed are burned or shredded
   - c.
     1) Medical records and X-rays legally belong to the physician
     2) X-rays and copies of records can be made and sent to another physician
     3) If patient is insistent, records can be copied and given to patient

9. Discussion should include:

   One who sees a person in danger through negligence of another cannot be charged with negligence in risking his/her own life or serious injury in attempting to assist or rescue that person providing the attempt is not reckless or rash

10. a, b, c, d, e

11. Any four of the following:
    - a. Has strong sense of right and wrong
    - b. Able to keep all confidences
    - c. Familiar with enforced laws dealing with medical profession
    - d. Practices the "Golden Rule"
    - e. Shows pride in profession

12. Evaluated to the satisfaction of the instructor

13. Evaluated to the satisfaction of the instructor

SECRETARIAL PROCEDURES
UNIT IV

UNIT OBJECTIVE

After completion of this unit, the student should be able to perform all necessary secretarial duties in the medical office. This knowledge will be evidenced through completion of assignment sheets, job sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with secretarial procedures to the correct definitions.
2. Select from a list duties of the business office assistant.
3. Select from a list qualities of good telephone manner.
4. Describe factors that contribute to the success of a professional call.
5. Describe procedures for types of appointments.
6. Select from a list necessary information for the appointment book.
7. List requirements for appointment book entries.
8. Arrange in order the proper sequence for making appointments.
9. Match types of files to the correct systems.
10. Select from a list types of filing systems used in the medical office.
11. State rules for filing alphabetically by indexing.
12. Match parts of a numeric filing system to the correct descriptions.
13. Distinguish between types of medical supplies.
14. Describe methods of controlling supplies.
15. Arrange in order steps to verify supplies.
16. Match terms associated with writing letters to the correct definitions.
17. Label styles of letters.
18. Match types of complimentary closes to the degree of their formality.
19. Describe points to remember when transcribing a letter.

20. Practice correct word usage.
21. Fill in appointment cards.
22. Index and type names.
23. Type words correctly.
24. Compose a business letter.
25. Care for incoming mail.
26. Order supplies.
27. Demonstrate the ability to use a transcriber.

SECRETARIAL PROCEDURES
UNIT IV

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

  A. Provide student with objective sheet.

  B. Provide student with information, assignment, and job sheets.

  C. Order film.

  D. Make transparencies.

  E. Discuss unit and specific objectives.

  F. Discuss information and assignment sheets.

  G. Demonstrate and discuss procedures outlined in job sheets.

  H. Order "Progressive Filing Practice Set" for students to use for additional practice.

  Kahn, Gilbert; Yerian, Theodore; and Stewart, Jeffrey R. *Progressive Filing*, 8th ed. New York: Gregg Division/McGraw-Hill Book Company, 1969.

  (NOTE: This is an excellent book on filing which includes a complete practice set with cards. Rules 19 and 20 may be too difficult to cover at this level; consider students' aptitudes.)

  I. Contact the telephone company for a practice set of telephones to be used in the classroom.

  J. Make an appointment with telephone representative to demonstrate telephone procedures to class.

  K. Ask a physician to compose some patient referrals on cassette tapes for students to practice typing letters using the dictaphone.

  (NOTE: If this cannot be accomplished, compose some yourself.)

  L. If possible, have appointment cards, health records, daily logs, ledgers and other needed forms printed.

  M. Provide or dictate sample letters for use with Assignment Sheet #6.

  N. Give test.

II. Instructional materials:

- A. Objective sheet
- B. Information sheet
- C. Transparency masters
    1. TM 1--Cross-Referencing Married Women's Names
    2. TM 2--Transcriber with Foot Control
    3. TM 3--Transcribing
    4. TM 4--Leaving Telephone Unattended
    5. TM 5--Indexing Personal Names
    6. TM 6--Margins - Elite and Pica
    7. TM 7--Parts of a Letter
- D. Assignment sheets
    1. Assignment Sheet #1--Practice Correct Word Usage
    2. Assignment Sheet #2--Fill in Appointment Cards
    3. Assignment Sheet #3--Index and Type Names
    4. Assignment Sheet #4--Type Words Correctly
    5. Assignment Sheet #5--Compose a Business Letter
    6. Assignment Sheet #6--Care For Incoming Mail
    7. Assignment Sheet #7--Order Supplies
- E. Job Sheet #1--Use a Transcriber
- F. Test
- G. Answers to test

III. Unit references:

A. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant,* 4th ed. New York: McGraw-Hill Book Company, 1978.

B. Kahn, Gilbert; Yerian, Theodore; and Stewart, Jeffrey R. *Progressive Filing.* 8th ed. New York: Gregg Division/McGraw-Hill Book Company, 1969.

C. Atkinson, Phillip S. *Medical Office Practice.* 2nd ed. Cincinnati: South-Western Publishing Co., 1976.

IV. Film--"Telephone Manners." Color, 10-14 minutes. NEM, 1975. Available from National Educational Media, Inc., 15760 Ventura Boulevard, Encino, California 91436.

(NOTE: This film is available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education/ Curriculum and Instructional Materials Center, 1515 W. 6th Ave., Stillwater, Oklahoma 74074. Out-of-state teachers must order from the address listed.)

SECRETARIAL PROCEDURES
UNIT IV

INFORMATION SHEET

I. Terms and definitions

   A. Personal name--Legal name of a person, whether it is usually used as an individual name, or as a part of a business name

   B. Surname--Last name of a person

   C. Given name--First name or initial and middle name or initial of a person

   D. Full name--Surname and at least one given name or initial of a person

   E. Natural order--Order in which a full name normally appears

   F. Indexing--Process of separating names for the purpose of selecting the caption under which a record is to be filed

   G. Indexing arrangement--Order in which the units of a name are arranged for filing

   H. Indexing unit--Part of a name that is used in alphabetizing

   I. Coding--Process of marking the indexing units in a name to indicate the order in which the units will be filed

   J. Filing order--Indexing order in which a name is written for filing purposes

   Examples: First indexing unit, second indexing unit

   K. Alphabetizing--Arrangement of single letters or words, in order, according to A through Z

   L. Filing--Systematic, orderly arrangement and storage of letters, invoices, statements, catalogs, and other materials

   M. Numeric filing--Assigning consecutive numbers to each correspondent or name having an individual folder

   N. Credit slip--Balance in favor of a person's account

   O. Running inventory--Accurate, up-to-date listing of supplies needed

   P. Cross-reference--Notation in the index showing the record is filed somewhere else

   Q. Salutation--An expression of greeting

   (NOTE: In a business letter the salutation is always blocked at the left margin and preceded and followed by one blank line.)

INFORMATION SHEET

II. Duties of the business office assistant (Assignment Sheets #4 and #6)

(NOTE: This is just a partial list.)

A. Sets up new patient file folders

B. Greets patients

C. Uses telephone efficiently

D. Makes appointments

E. Types letters

Examples: Referrals, medical histories, and collections

F. Opens, reads, and sorts incoming mail

G. Files records and orders supplies

H. Transcribes letters and medical health reports

III. Qualities of good telephone manner (Transparency 4; Assignment Sheet #1)

A. Pleasantness

B. Promptness

C. Interest

D. Politeness

E. Helpfulness

(NOTE: If you are working in a one-telephone-line office, try to space your outgoing calls so that incoming calls can get through.)

IV. Factors that contribute to the success of a professional call

A. Choice of words

1. Give clear explanations

2. Avoid slang expressions

3. Use short, simple, descriptive words

4. Use expressions of courtesy

5. Use person's name often

(NOTE: Repeat needed information to make sure patient clearly understands.)

INFORMATION SHEET

B. Tone of voice

  1. Speak directly into mouthpiece

  2. Use normal conversational tone

  3. Speak clearly and distinctly

  4. Say it with a smile

C. Closure of conversation

  1. Use courtesy

     Example: "Thank you for calling Mr. Palmer."

  2. Hang up gently

     (NOTE: Use "hold" button on phone if you need to discontinue conversation for a short period of time. If "hold" equipment is not available, gently lay receiver down for desk phone or hang against side for wall phone.)

V. Procedures for types of appointments (Assignment Sheet #2)

A. New patient

  1. Usually appoint for examination for one hour

  2. Indicate in appointment book as new patient

     Example: "New" circled in red by name; red "X" by name; color code; a check mark

B. Recall appointment

  1. Appoint patient for follow-up exam and/or treatment

  2. Call to inform patient of laboratory or X-ray results

C. Sales representative

  1. Appoint sales representatives as your office advises

  2. Have order ready for review

D. School children

  1. Give preference to other appointments

  2. Schedule after school

INFORMATION SHEET

VI. Necessary information for the appointment book

A. Patient's full name

(NOTE: The reason for the full name is not to confuse patient with another whose name is very similar. Indicate whether patients are adults or children.)

B. Patient's telephone number

(NOTE: This is used to reach patient for necessary change in appointments or for reminder.)

C. Time of appointment

D. Purpose of appointment

(NOTE: This assists in determining how much time is to be allotted for appointment.)

E. Work to be done

VII. Requirements for appointment book entries

A. Accurate

B. Legible

C. Complete

D. Written in pencil

VIII. Proper sequence for making appointments

A. Complete entry in pencil in units of time

Example: Patient's first and last name, age, complete phone number during working hours - if it is a new patient

B. Write appointment card for patient

C. Double check appointment card and appointment book

(NOTE: Unless this sequence is followed you could make out the appointment card and not enter patient. Then, at appointment time, you could end up with two patients scheduled at the same time.)

INFORMATION SHEET

IX. Types of files and correct systems

A. Patient's record file--Kept together in a file folder or envelope and filed alphabetically or numerically

(NOTE: Patient's record files usually consist of health charts, case histories, financial records, insurance forms, and correspondence.)

B. Business record file-Maintained in a subject file

C. Recall file--Card file organized alphabetically; color-coded by month

D. Radiography file--Kept alphabetically or in patient's record file

E. Come-up file--Filed chronologically by month

(NOTE: This is usually a file of things to do at a certain time of the month.)

Examples: Birthday cards, equipment maintenance

X. Types of filing systems used in the medical office

A. Subject

B. Numeric

C. Chronologic

D. Alphabetic

(NOTE: The alphabetic system is the arrangement from A to Z. This system, in one way or other, is used for about 90 percent of all filing done in a medical office.)

XI. Rules for filing alphabetically by indexing (Transparencies 1 and 5; Assignment Sheet #3)

A. Individual name indexed with last name (surname)

B. Last name followed by first name (given name)

C. First name followed by middle name or initial

D. Surname with initial before surnames with a first name

(NOTE: The following examples will show how names should be indexed and arranged in the file cabinet or shelf.)

Examples:

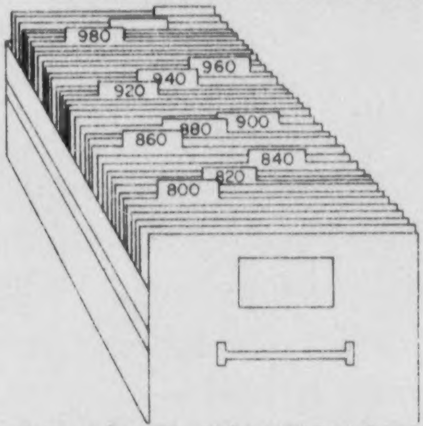
Name	1	2	3
Linda Jane Barrett	Barrett	Linda	Jane
Diana Burns	Burns	Diana	
Cathy Christine Monts	Monts	Cathy	Christine
Chere Jean Reid	Reid	Chere	Jean

INFORMATION SHEET

XII. Parts of a numeric filing system

(NOTE: All of the following are used to complete a numeric filing system.)

A. Main numeric file--Contains individual folders with numeric captions



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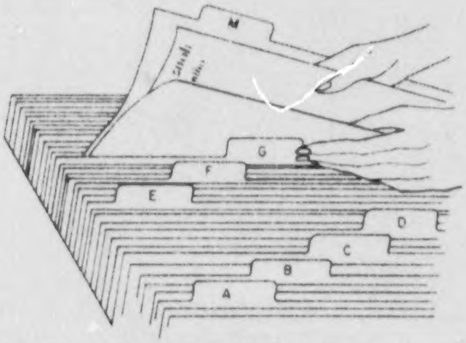
B. Miscellaneous alphabetic file--Contains several folders bearing alphabetic captions



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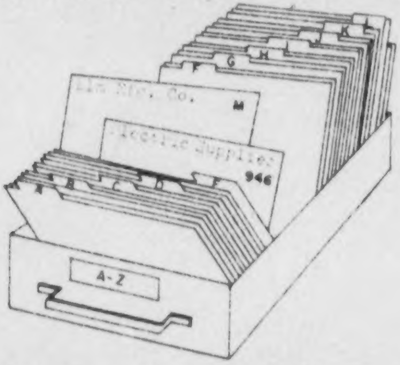
C. Card index--Contains names or subjects that are arranged alphabetically



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INFORMATION SHEET

XIII. Types of medical supplies

A. Expendable--Items that are consumed or used up in services

Examples: Local anesthesia, tongue depressors

B. Nonexpendable--Reusable items that are not of major cost

Example: Instruments

C. Capital supplies--Costly items that are seldom replaced

Examples: Exam tables, EKG machine

XIV. Methods of controlling supplies (Assignment Sheet #7)

A. Check supplies off of checklist as used

(NOTE: Most offices have a list of supplies on hand posted in the laboratory cabinet.)

B. Use want list to record supplies needed

(NOTE: This is a list that can be posted in clinic for items you will need to order. Your doctor will indicate the supply level to maintain.)

XV. Steps to verify supplies

A. Open supplies upon arrival

B. Check supplies received against invoice

C. File invoice

(NOTE: You may receive a credit slip if all supplies are not available; if so, file with invoice and be sure to get credit.)

D. File back order slip

XVI. Terms associated with writing letters (Transparencies 6 and 7; Assignment Sheet #5)

A. Letterhead--Firm's name, address, telephone number, and/or symbol identifying nature of firm's business; usually appears at top of stationery

B. Date line--Month, date of the month, and year

C. Inside address--Name, address, and company of the person to whom the letter is written

INFORMATION SHEET

D. Salutation--Opening greeting of the letter

E. Body--All the material between the salutation and the complimentary close; the message

F. Complimentary close--"Good-bye" of the letter

G. Signer's identification line--Typed name and title of the person who signs the letter

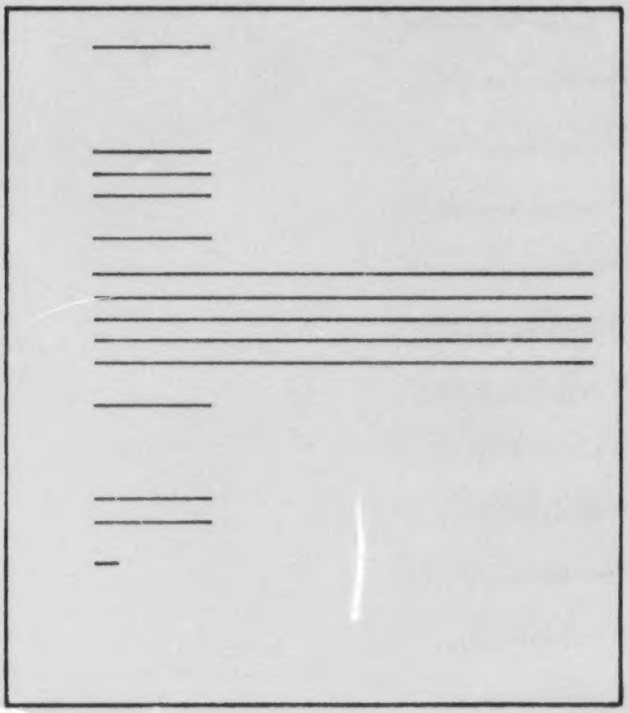
H. Reference line--Used to identify the typist and the person who signs the letter

I. Memorandum (memo)--Written exchange of ideas between individuals, departments, or branches of one organization

J. Formal report--Process of presenting business information and data in report form

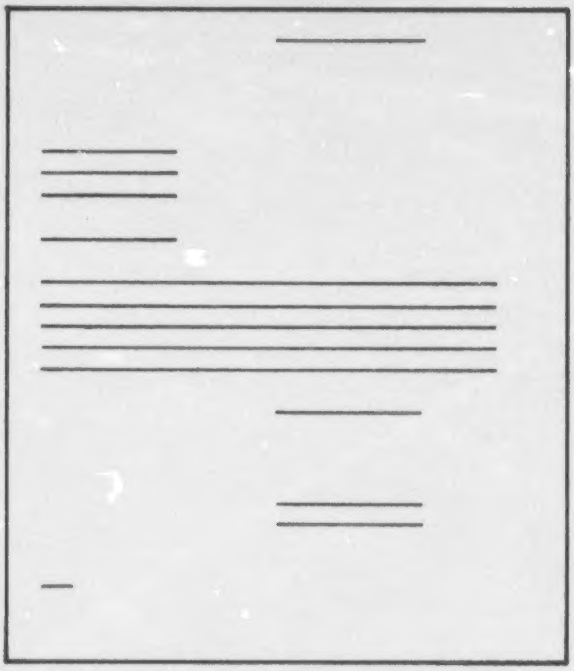
XVII. Styles of letters

A. Blocked

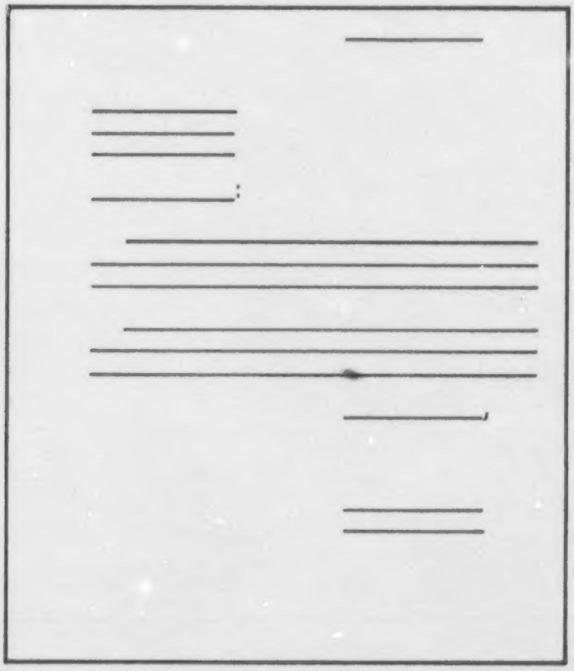


INFORMATION SHEET

B. Modified block; open punctuation

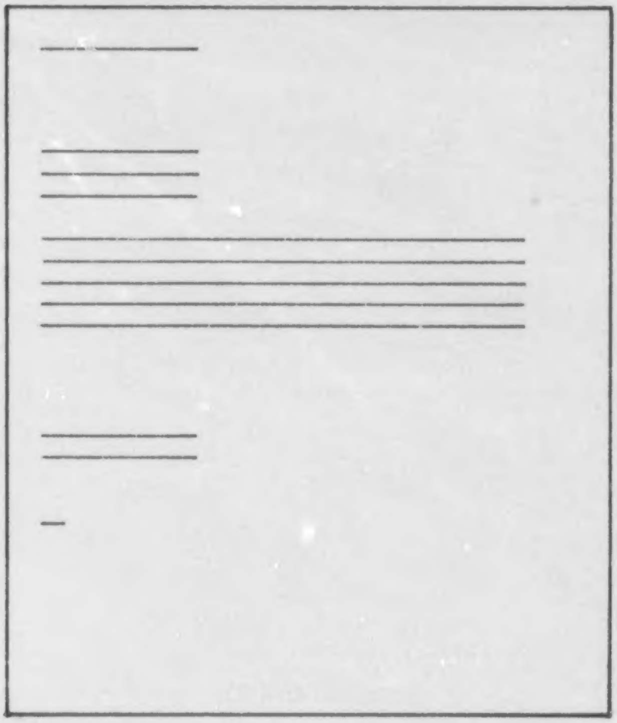


C. Modified block; indented with mixed or standard punctuation



INFORMATION SHEET

D. AMS (Administrative Management Society) simplified



XVIII. Degree of formality of types of complimentary closes

A. To show great respect--Respectfully yours, yours respectfully, very respectfully yours, yours very respectfully

B. Formal--Yours very truly, very truly yours

C. Somewhat less formal--Sincerely yours, yours sincerely, yours very sincerely, very sincerely yours

(NOTE: This group of closings is preferred in most cases.)

D. More personal and friendly--Cordially yours, yours cordially, yours very cordially, very cordially yours

XIX. Points to remember when transcribing letters (Transparencies 2 and 3; Job Sheet #1)

A. Carefully review all instructions before typing

B. Type only what you clearly understand; when in doubt, ask

(NOTE: This will save time and retyping.)

INFORMATION SHEET

C. Return dictation marked "rush" as it is transcribed

D. Use correspondence folders for proper handling of all correspondence materials

E. Erase cassettes only after typed material has been checked and signed by the originator

F. Make certain the originator has a sufficient supply of cassettes

(NOTE: Avoid work pile-ups; keep things moving rapidly and efficiently.)

G. Type envelope exactly like inside address

H. Check to make sure enclosures, attachments, and specified number of copies have been included in envelope

Examples: Carbon copies, forms, checks

Cross-Referencing Married Women's Names

Lakewood, Marilyn Ann (Mrs.)

Mrs. Terence Lakewood
6409 Star Ave.
Perry, OK 70001

Original Card

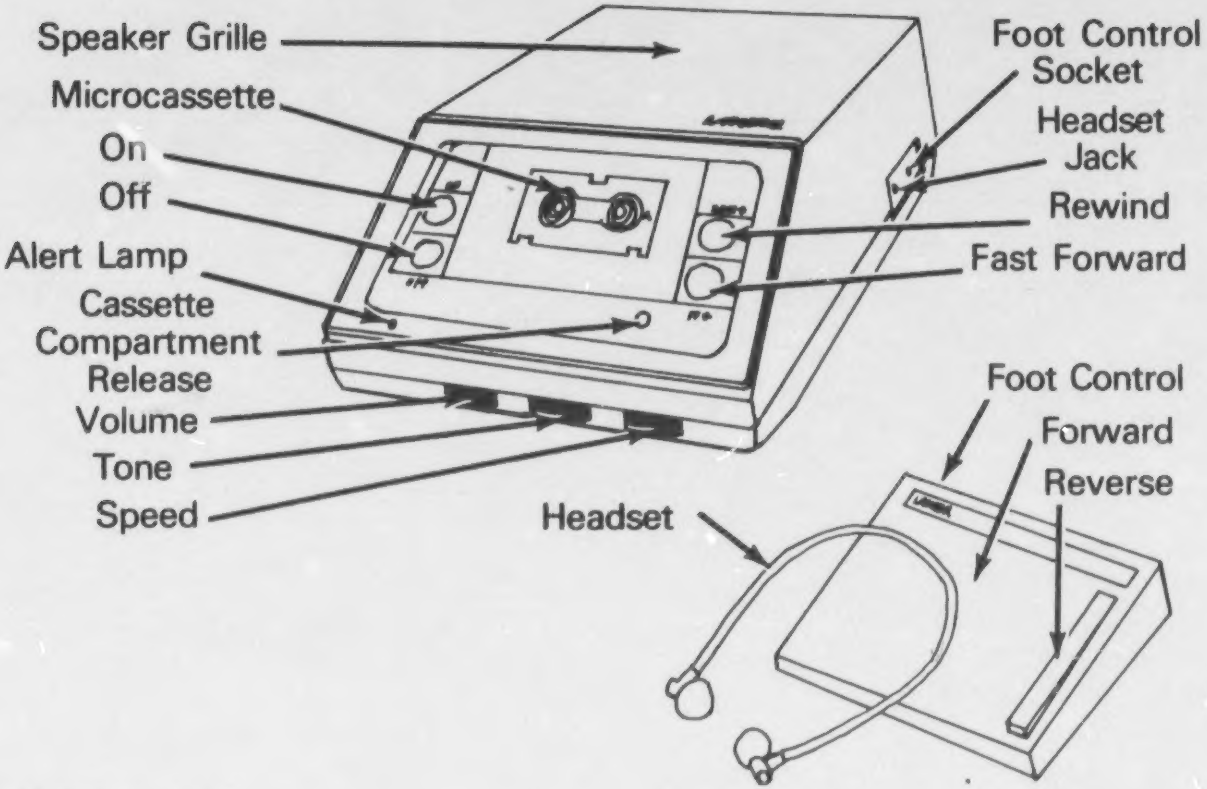
Cross-Reference Card

Lakewood ,Terence (Mrs.)

6409 Star Ave.
Perry, OK 70001

Lakewood, Marilyn Ann (Mrs.)

Transcriber With Foot Control


Speaker Grille
Microcassette
On
Off
Alert Lamp
Cassette Compartment Release
Volume
Tone
Speed
Foot Control Socket
Headset Jack
Rewind
Fast Forward
Foot Control
Forward
Reverse
Headset

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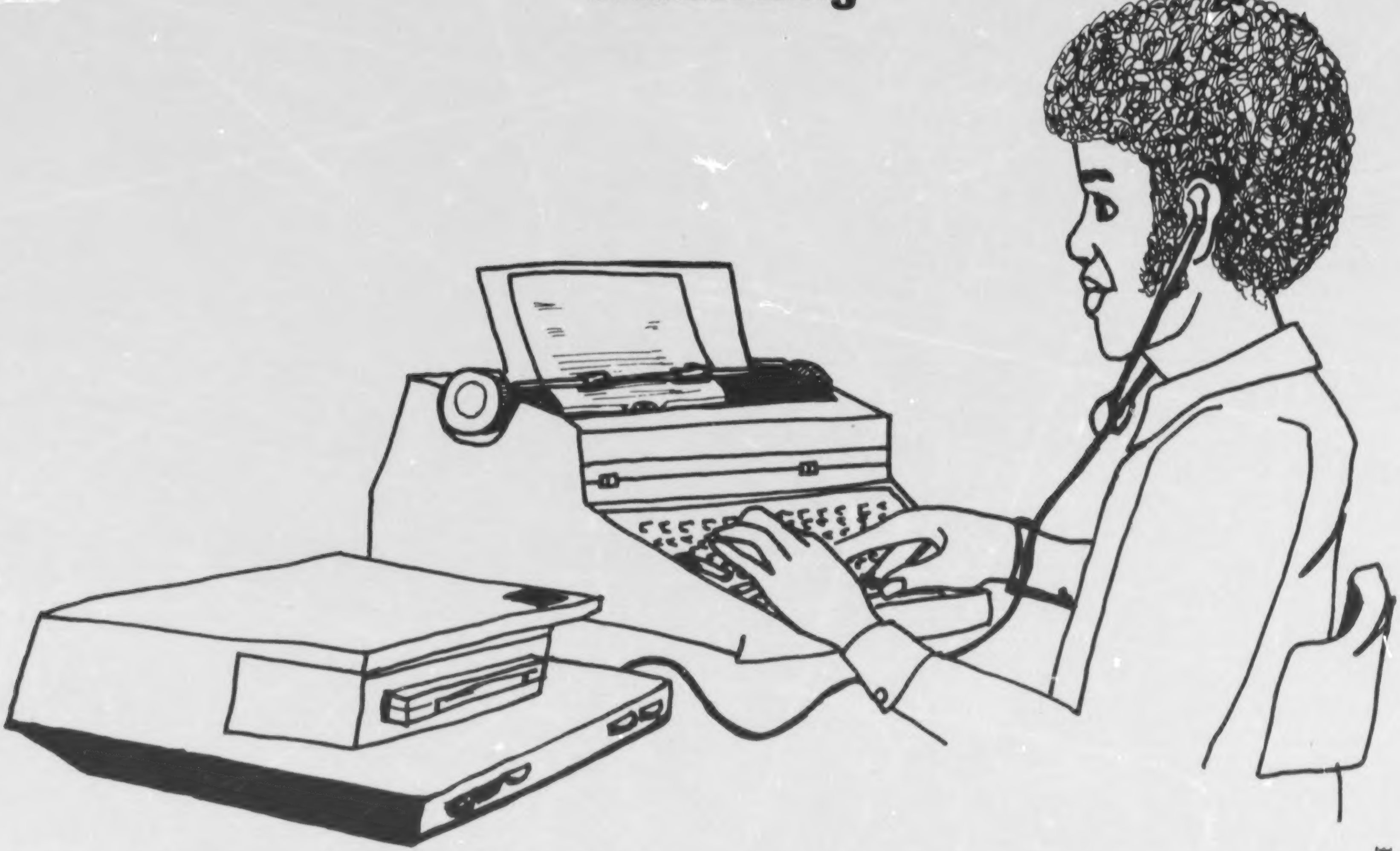
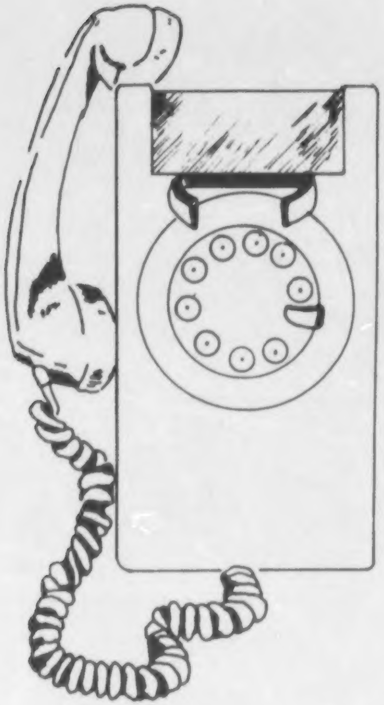
Transcribing



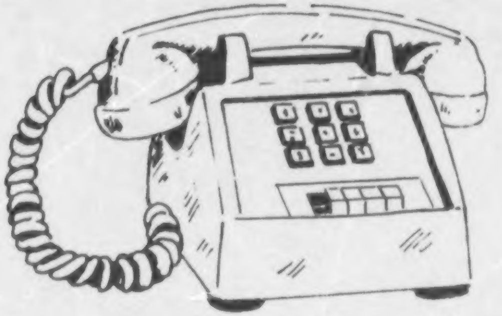
TM 3

MA-135-C

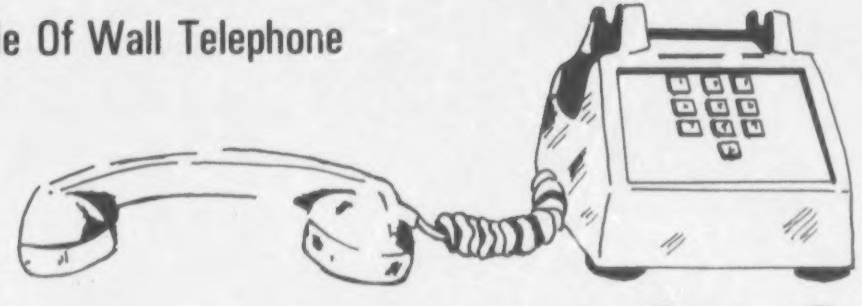
Leaving Telephone Unattended



Lay Receiver Against Side Of Wall Telephone



Press Hold Button



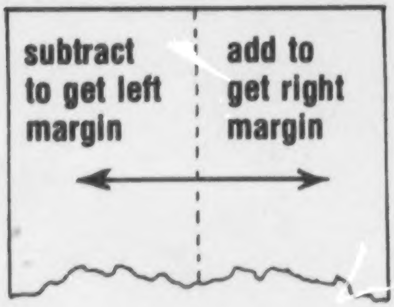
Lay Receiver Flat

MA - 139-C

Indexing Personal Names

Personal Name	Unit 1	Unit 2	Unit 3
Jessica Abner	Abner	Jessica	
William Allway	Allway	William	
Wendy Atwood	Atwood	Wendy	
Maria Dela Rosa	Dela Rosa	Maria	
Kirk McCluskey	McCluskey	Kirk	
Daniel Murphy	Murphy	Daniel	
Pamela Ann Osgood	Osgood	Pamela	Ann
L. M. Steward	Steward	L.	M.
Lawrence M. Steward	Steward	Lawrence	M.
Cheryl Webb	Webb	Cheryl	
Robin Wells	Wells	Robin	
Sarah Hatfield-Zabrinski	Zabrinski	Sarah	Hatfield

Margins - Elite And Pica



For an elite machine with 50 as center

50 space line		60 space line		70 space line	
50 divided by 2=25		60 divided by 2=30		70 divided by 2=35	
50	50	50	50	50	50
- 25	+ 25	- 30	+ 30	- 35	+ 35
25	+ 5 bell	20 L	+ 5	15 L	+ 5
Left Margin	80 Right Margin		85 R		90 R

4 inch line = 4 x 12 = 48 = 50 space line

5 inch line = 5 x 12 = 60 space line

6 inch line = 6 x 12 = 72 = 70 space line

For a pica machine with 42 as center:

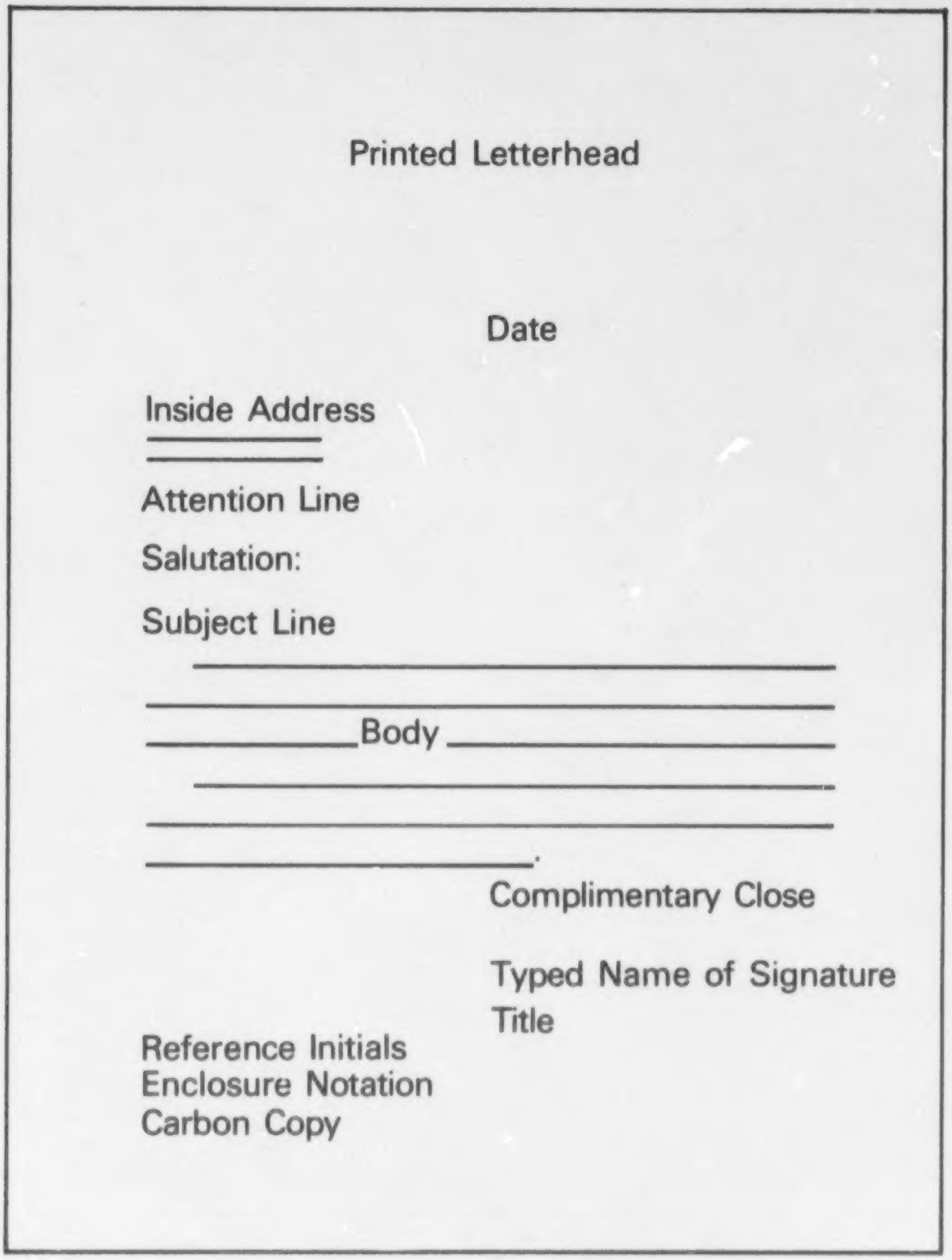
50 space line		60 space line		70 space line	
50 divided by 2 = 25		60 divided by 2 = 30		70 divided by 2 = 35	
42	42	42	42	42	42
- 25	+ 25	- 30	+ 30	- 35	+ 35
	+ 5 bell		+ 5		+ 5
17 L		12 L		7 L	
	72 R		77 R		82 R

4 inch line = 4 x 10 = 40 space line

5 inch line = 5 x 10 = 50 space line

6 inch line = 6 x 10 = 60 space line

Parts of a Letter



Printed Letterhead

Date

Inside Address

Attention Line

Salutation:

Subject Line

Body

Complimentary Close

Typed Name of Signature
Title

Reference Initials
Enclosure Notation
Carbon Copy

SECRETARIAL PROCEDURES
UNIT IV

ASSIGNMENT SHEET #1--PRACTICE CORRECT WORD USAGE

NAME ______________________________ SCORE ______________

Words are like shoes, they are used to propel you to a certain destination. However, the way you choose to travel is up to you. It may be quicker and easier to walk in sneakers, but silver slippers boost your pride and change your image. You will notice the response of those around you change also.

(NOTE: Gates are open for silver slippers but sneakers aren't admitted.)

Words are exactly the same way with medical assistants, and they are well worth studying. You will be amazed how fast gates will open for you that might otherwise be closed.

Study the following list of statements and examples of better responses.

ON THE TELEPHONE:

Thank you for calling.	Thank you for calling, Mrs. Jones.
The doctor is tied up right now.	The doctor is with a patient, but may I help you?
May I ask who's calling, please?	May I tell the doctor who's calling, please?
You're overdue for your physical.	Your last physical examination was May 10th, 1979 which is over two years ago.
We'll send it to the lab.	The doctor's laboratory technician will adjust it.
It sounds like bronchitis.	I really couldn't tell you Mrs. Smith; even the doctor would have to examine you first to determine what it is.
The doctor's not here. I don't know where he went.	The doctor is at the hospital, but I expect her back shortly.
The doctor will call you back in a little while.	The doctor will call you back as soon as possible.
Don't worry about it. It's just a phase patients go through.	Please hold the line, Mr. Blank, and I'll ask the doctor.
I'm sorry, we never quote fees on the telephone.	Even the doctor couldn't tell you without an examination. I'll be glad to schedule a time for you to see the doctor . . .

ASSIGNMENT SHEET #1

What's your name?	Would you spell your first and last name for me, please?
(RE: overdue account) When Mrs. Jones comes home, will you have her call Dr. Deith's office?	When Gladys comes home, will you have her call Julie at 123-4566, please?
Huh?	I'm sorry, I didn't hear you.
The doctor can't come to the phone, but I can take the message.	The doctor is with a patient just now. May I give him the message, or can he call you back?

MAKING APPOINTMENTS:

I can't take you without an appointment.	The doctor's schedule is filled, Mrs. Green, but I'll find the quickest appointment possible that he can see you.
The doctor's running behind schedule.	The doctor had to re-schedule because of an emergency.
I can give you Tuesday at 10:00.	The doctor can see you Tuesday at 10:00.
There's no time to squeeze Mary into your appointment, Mrs. Jones.	The doctor needs a full appointment to properly examine Mary, Mrs. Jones.
You're wrong, Mr. Kent. Your appointment is at 2.	Maybe I didn't make the time clear to you, so I'll schedule another time for you to see the doctor.

TALKING WITH PATIENTS:

Don't worry, Mrs. Cole, there's nothing to it.	Don't worry, Mrs. Cole, it isn't a complicated procedure.
Your sister-in-law's doing fine after her hysterectomy.	Your sister-in-law was fine the last time I saw her.
I'm sorry you feel so terrible.	I'm sorry you're so uncomfortable.
My doctor probably has the biggest practice in town.	My doctor is a wonderful person to work for.
What's the trouble?	What seems to be bothering you, Mr. Jones?
Would you like to come in, please?	The doctor is ready to see you, Mr. Jones.
I don't know.	Just a moment, and I'll check on that for you.

ASSIGNMENT SHEET #1

No kidding.	Really?
Bye-bye, or bye now.	Goodbye, Mrs. Clark. We'll see you next week.
The doctor's out to coffee. You could call back in about ten minutes.	The doctor is out of the office just now. If you'll give me your number, he will call you as soon as possible. (CAUTION: Never give out information that physician is out of town.)

Using your own words, write better responses than the statements given.

Thanks for calling in. ______________________________

____

Who is this? ______________________________

____

You've probably got cystititis. ______________________________

____

What's the name again? ______________________________

____

I don't know where the doctor is right now, do you want to leave a message? ______________

____

You can't come in without an appointment. ______________________________

____

How about Wednesday afternoon? ______________________________

____

No, Mrs. Kent, I told you your apointment was Friday. ______________________________

____

Don't worry about a thing, it's a real easy procedure. ______________________________

____

ASSIGNMENT SHEET #1

What's wrong with you?____

____

I have no idea. ____

____

The doctor's out playing racketball, why don't you call back later.________________

____

SECRETARIAL PROCEDURES
UNIT IV

ASSIGNMENT SHEET #2--FILL IN APPOINTMENT CARDS

NAME ______________________________ SCORE ______________

It is very important that you give each of your patients an appointment card. Write the patient's name, time, and date in the appointment book, then write the time and date on the appointment card. If more than one appointment is given, try to give the patient the same time of day for each appointment; this makes it much easier for patients to remember. Ask patients to bring their appointment card with them, as this will verify any misunderstanding if the patient should arrive on the wrong day.

Examples: Appointment card

Mary Anne Smith, M.D.
1515 West 6th Ave., Smalltown, OK
74396

The time noted on this card is reserved for you.

Monday __________ AT ______
Tuesday __________ AT ______
Wednesday __________ AT ______
Thursday __________ AT ______
Friday ____May 12____ AT __4:00__
Saturday __________ AT ______

If appointment cannot be kept, please give 24 hr. notice.

Office Phone: 477-2000

(Front)

Reservation ____Joyce Sawatzky____

Day	Date	Time
Friday	May 12	4:00

This time is reserved especially for you. If you are unable to keep an appointment, please call a day ahead so that another patient can use this time.

(Back)

Complete the appointment cards for the following patients on the appointment cards provided.

ASSIGNMENT SHEET #2

1. Debbie Griffith would like an appointment for July 30, 1:00 p.m.

Jane Allen, M.D.
Steven McCluskey, M.D.
Doctors of General Surgery
833 North Pine Street
Smallsville, Oklahoma 74074
Phone: 372-1111

Reservation

Day	Date	Time
______	______	______
______	______	______
______	______	______
______	______	______

This time is reserved especially for you. If you are unable to keep an appointment, please call a day ahead so that another patient can use this time.

(Front)

TO SERVE YOU BETTER

FEES--A written itemized estimate will accompany the explanation of care needed. Questions are appreciated.

PAYMENT--Complete payment is expected at the time of care. Any other arrangement must be agreed on in advance. Federal Legislation limits our role with credit (Federal Truth-In-Lending Act effective July 1, 1969).

EMERGENCIES--Call our office or answering service immediately

BROKEN APPOINTMENTS--We are unable to serve those who repeatedly misuse time that others need.

(Back)

2. Lynne Murnane would like an appointment for June 20, 10:30 a.m.

Kelly R. Miller, M.D.
123 Maple Street
Bigcity, Oklahoma 12345

The time noted on this card is reserved for you.

Monday__________________ AT ______________
Tuesday__________________ AT ______________
Wednesday________________ AT ______________
Thursday_________________ AT ______________
Friday___________________ AT ______________
Saturday_________________ AT ______________

If appointment cannot be kept, please give 24 hr. notice.

Office Phone: 477-2000

ASSIGNMENT SHEET #2

3. Jamee Sloan would like an appointment for Tuesday, June 10, at 2:30 p.m.

Joe Crosthwait M.D.
400 Miller Street
Megacity, Oklahoma 76200

The time noted on this card is reserved for you.

Monday____________________AT__________
Tuesday____________________AT__________
Wednesday__________________AT__________
Thursday___________________AT__________
Friday_____________________AT__________
Saturday___________________AT__________

If appointment cannot be kept, please give 24 hr. notice.

Office Phone: 377-2000

SECRETARIAL PROCEDURES
UNIT IV

ASSIGNMENT SHEET #3--INDEX AND TYPE NAMES

NAME ______________________________ SCORE ______________

To keep a medical office running smoothly, it is necessary that all records be kept in their proper place. To do this you must know how to alphabetize and index names quickly and correctly.

PART I

Index each name below on a 3 x 5 card or paper cut to that size. Start each name 1/2 inch from the top and 1/2 inch in from the left margin. Arrange the cards in alphabetical order, and number each card in the top right-hand corner, after you finish indexing.

1. Charles N. Bledsoe
2. Oliver Alldridge
3. Lucille Cain
4. James V. Adams
5. Neal S. Baker
6. Nowlin Caine
7. Marie Ainsworth
8. Clinton Basham
9. Hoyt Carney
10. Kimberly Baird
11. Fred Adams
12. Billy Bryant
13. James L. Adams
14. Raymond M. Banks
15. A.M. Aimsworth
16. Leland K. Barrow
17. Lorene Boggs
18. Olivia Aldredge
19. C.B. Bryant
20. Thos. L. Bailey

PART II

Type each of the following names in correct indexing order on a 3 x 5 card. Set left margin six spaces from edge of card. Type name on third line from top, type street address on fifth line, and city and street on sixth line.

Betsy Book, 6713 Kenwick, Stillwater, Oklahoma 12345
Ralph Brown, 1313 Ruby St., Perry, Oklahoma 12346
Carl Baker, 1212 Finwich, Glencoe, Oklahoma 12348
Marie Maddox, 713 Alta Vista, Perkins, Oklahoma 12349
Susan Thompson, 603 Ridgeway, Pawnee, Oklahoma 12347
Sue B. Thompson, 603 Ridgeway, Stillwater, Oklahoma 12345
R.J. Brown, 4789 Wren, Stillwater, Oklahoma 12345
Betsey Book, 1121 Kendel, Carney, Oklahoma 12343
Henry O'Riley, 226 Rodeo, Yale, Oklahoma 12341
Sue Ann Nevins, 111 Freeway Dr., Stillwater, Oklahoma 12345

SECRETARIAL PROCEDURES
UNIT IV

ASSIGNMENT SHEET #4--TYPE WORDS CORRECTLY

NAME ______________________________ SCORE ______________

When a reader reads a letter, the use of negative words gives him or her a negative attitude. Positive words are like a winning smile, enthusiasm, and laughter. They put the reader in a positive frame of mind.

Practice typing the words listed below, and think as you type how the words could be used in a letter.

ability
achieve
advantage
agree
beauty
benefit
character
charming
comprehensive
determined
economy
fun
good
guarantee
health
helpful
holiday
ideal
industrious
joy
judgment
kind
knack
lasting
lovely
maximum
music
news
opportunity
pleasant
productive
profit
pure
reasonable
rejoice
reliable
satisfy
save
service
smile
success
think
thrive
truth
understand
unity
useful
valuable
victory
vigorous
warm
wholesome
winning
wonderful
you
youthful

SECRETARIAL PROCEDURES
UNIT IV

ASSIGNMENT SHEET #5--COMPOSE A BUSINESS LETTER

NAME______________________________________ SCORE__________________

Outgoing letters prepared by the medical assistant represent your doctor(s)! Because letters are written to handle "routine" matters, sometimes their importance is overlooked or underestimated. The procedures that you use for letter writing are just as important as the procedures used by your doctor(s) in diagnosing a disease.

Use the guidelines below to prepare a business letter:

1. DATE LINE

   a. Position date line two to four spaces below the letterhead.

      (NOTE: The position of the date line on the page depends to some extent on the style of the letter used and the length of the letter. It should be flush with either the right- or left-hand margin, depending on the style of the letter.)

   b. Date the letter the day it is dictated, not the day it is typed.

   c. Do not use "d," "nd," "rd," "st," or "th" following the date of the month.

   d. Do not abbreviate or use figures for the month.

   e. Do not spell out the day of the month of the year, except in very formal letters.

2. INSIDE ADDRESS

   (NOTE: This inside address contains the name of the addressee and the address, including the zip code. In addressing an individual in a company, the inside address contains both the individual's name and that of the company. It may also contain the individual's business title.)

   a. Begin the inside address at the left-hand margin of the letter, not less than two spaces, nor more than 12, below the date line.

      Example:

      Dr. Kim Tyler, Associate Professor
      Department of Family Relations
        and Child Development
      Oklahoma State University
      1001 University Avenue
      Stillwater, Oklahoma 12345

      (NOTE: The exact position of the first line of the address depends on the length of the letter. Six lines below the date is suggested for an average-size letter.)

ASSIGNMENT SHEET #5

b. Avoid extending the inside address beyond the middle of the page.

(NOTE: If a line is carried over, indent it two spaces from the left margin.)

c. Single space the address even if the body of the letter is double spaced.

d. Use the official name of the company addressed.

(NOTE: If "Company," "Co.," "The," or "Inc." is part of the company's official name, use the form shown by the company title.)

e. Do not precede the street number with a word, a sign, or a room number.

f. Use post-office box number in preference to street address, if you know it.

g. Spell out the numeric names of streets and avenues of they are numbers of 100 or under, unless space is limited.

h. Use figures for all house numbers except "one."

i. Separate the house number from the numerical name of a thoroughfare with a space, a hyphen, and a space.

j. Avoid abbreviating the names of cities, unless the abbreviation is standard.

Example: St. Louis, St. Paul

k. Do abbreviate the names of states, territories, and United States possessions.

l. Write a postal zip code after the state; do not separate zip code from state with a comma or put comma in zip code.

(NOTE: Not less than two spaces nor more than six spaces should be left between the last letter of a state and the first digit of the postal zip code.)

m. Put city, state, and zip code on the same line.

n. Do not abbreviate business titles or positions, such as president, secretary, or sales manager; place person's business title on the first line.

(NOTE: The modern trend is to omit the business title, particularly if it makes the address run over four lines.)

o. Place the individual's name on the first line and company's name on the second line when addressing an individual in a firm, corporation, or group.

p. Do not hyphenate a title unless it represents a combination of two offices.

ASSIGNMENT SHEET #5

3. SALUTATION

a. Type the salutation two spaces below the inside address, flush with the left-hand margin.

(NOTE: If an "attention" line is used, type the salutation two spaces below the attention line.)

b. Capitalize the first word, the title, and the name; follow a title with a surname.

Example: Dear Dr. Smith:

c. Use a colon following the salutation.

(NOTE: A comma is used only in social letters, particularly those written in longhand.)

d. Never use a designation of any kind *after* a salutation.

e. Never use a business title or designation of position in a salutation.

f. Use "To Whom It May Concern" as salutation in letters not addressed to any particular person or firm; capitalize each word.

Example: A general letter of recommendation

4. BODY OF LETTER

a. Single space lines of message.

(NOTE: The body may be double-spaced if message is very short.)

b. Leave one blank line between paragraphs.

c. You may indent paragraphs five spaces.

(NOTE: This indention is required if the message is double-spaced.)

d. Keep message brief.

e. Include all information that the receiver needs.

f. Say what is meant simply and directly.

g. Present your information correctly and in proper form.

(NOTE: Make sure all facts, figures, spelling, punctuation, grammar, and style details are correct. Proofread before removing paper from typewriter.)

ASSIGNMENT SHEET #5

h. Be courteous to your reader.

i. Be concise without being too abrupt.

(NOTE: This tone is usually set by the first sentence of the letter.)

j. Create a favorable impression.

5. COMPLIMENTARY CLOSE

a. Type with one blank line between the last line of the body and the closing.

b. Capitalize only the first word.

c. Relate to the formality or informality of the salutation.

d. Leave three blank spaces between complimentary close and signer's identification line.

6. REFERENCE NOTATION

(NOTE: This is used only when the person does not type his or her own letter.)

a. Block at the left margin.

b. Leave one blank line below the signer's identification line.

c. Not necessary to repeat signer's initials in the reference line if his or her name is typed in the identification line

Examples:	ABS:AK	abs/k	amk
	ABS:K	A.B. Smith/ak	ABS/ak

SECRETARIAL PROCEDURES
UNIT IV

ASSIGNMENT SHEET #6--CARE FOR INCOMING MAIL

NAME ______________________________ SCORE ______________

One of the very important duties of the medical assistant is to handle the daily mail. It is not unusual for a doctor to receive more mail than any other type of professional. It is important that you learn to sort and care for it properly.

Included in each day's mail may be checks, statements, personal letters, magazines, samples, and packages.

Always open mail neatly, using a letter opener.

NEVER open mail marked "personal."

Put the following mail on doctor's desk:

Announcements of medical meetings
Advertisements of interest to doctor
Letters from professional people
Letters soliciting contributions
Professional journals
Letters from patients

The following mail is handled by the medical assistant:

Invoices and back orders for supplies
Payments of accounts
Statements for office supplies
Magazines and newspapers
Packages and samples

(NOTE: Keep the envelopes to check the current addresses. Double check to see if anything else has been left in envelope.)

PART I

Distinguish between the mail put on the doctor's desk and the mail the assistant will take care of. Place a "D" before doctor's mail and an "A" before assistant's mail in the space provided in the following chart.

INCOMING MAIL	DOCTOR	ASSISTANT
Invoices and back orders for supplies		
Letters from patients		
Packages and samples		

ASSIGNMENT SHEET #6

INCOMING MAIL	DOCTOR	ASSISTANT
Magazines and newspapers		
Professional journals		
Letters soliciting contributions		
Letters from professional people		
Payments of accounts		
Statements for office supplies		
Advertisements of interest to doctor		
Announcements of medical meetings		

PART II

Check off the following duties as you perform them, or discuss them in class. If you are in doubt, use this unit for review.

	YES	NO
1. Did you check money orders and checks for mistakes?		
2. Did you put them in a safe place until you could post them?		
3. Did you check invoices for errors and file them under unpaid bills?		
4. Did you open sample packages and put them into the cabinet?		
5. Did you open packages and place laboratory cases for doctor to see?		
6. Did you open packages and place supplies in supply cabinet?		
7. Did you check supplies against the invoices?		
8. Did you place magazines in the waiting room?		
9. Did you discard junk mail?		

SECRETARIAL PROCEDURES
UNIT IV

ASSIGNMENT SHEET #7--ORDER SUPPLIES

NAME ______________________________ SCORE ______________

There are several ways to order medical supplies: by telephone, "rush order" cards, order blanks, or from regular calls made to your office from medical supply representatives. Most offices will order from the representative. Be courteous to your representative as he or she can be of valuable assistance in many ways. Sometimes you will need to use a "rush order" card for additional supplies.

Use the "rush order" card below to order the following supplies

2 boxes of 4 each, antiseptic scrub
1 box of 12 each, 4 x 4s (unsterile)
2 boxes of 36 each, cotton swabs
6 sterile straight catheters

(NOTE: Be sure to put date, doctor's name, and address.)

Reid Medical Supply
1111 Oak Street
Anytown, Oklahoma 98765

______________ 19 ____

Please ship the following:

RUSH ORDER ☐

QUANTITY	ITEM

Sign Name and Address Clearly

NAME ______________________________

ADDRESS ______________________________ CITY ______________

SECRETARIAL PROCEDURES
UNIT IV

JOB SHEET #1--USE A TRANSCRIBER

(NOTE: There are various types and brands of transcribers available. Become familiar with the equipment used in your office.)

I. Materials

   A. Transcriber with foot control

   B. Cassette

II. Procedure

   A. Plug into AC outlet

   B. Connect foot control and headset (earpiece) to transcriber

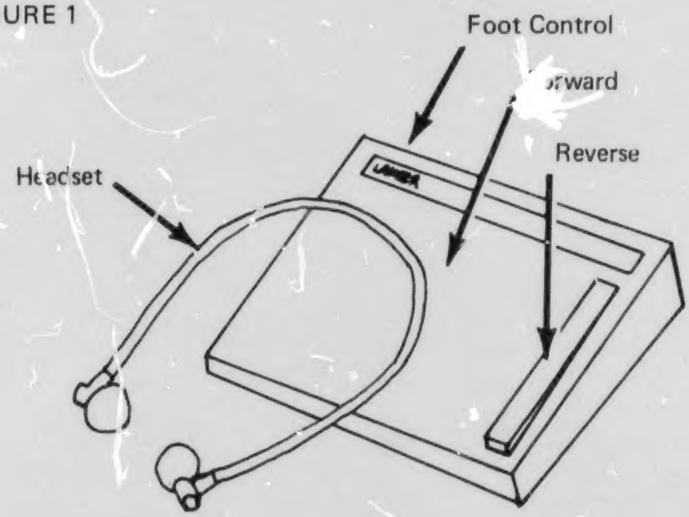
   C. Put on headset (earpiece)

   D. Load by pressing compartment release button, and snap in cassette, with side to be transcribed facing up

      (NOTE: The on/off control must be in the off position to load and unload the cassette.)

   E. Press center of foot control to listen; press edge of foot control to reverse tape (Figure 1)

FIGURE 1



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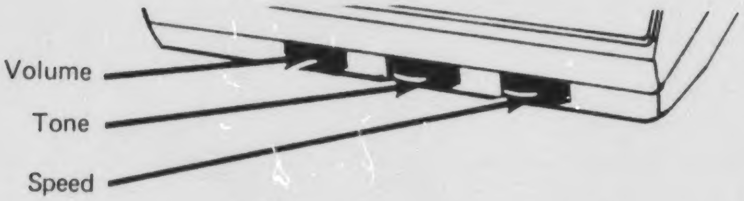
JOB SHEET #1

F. Adjust volume, tone and speed (Figure 2)

FIGURE 2



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G. When transcription is complete, press rewind to move tape back to beginning

H. Turn transcriber off

I. Press cassette compartment release button

J. Remove cassette

SECRETARIAL PROCEDURES
UNIT IV

TEST

NAME____________________ SCORE__________

1. Match terms associated with secretarial procedures to the correct definitions. Place the correct numbers in the blanks provided.

______a. Indexing order in which a name is written for filing purposes

______b. Balance in favor of a person's account

______c. First name or initial and middle name or initial of a person

______d. Systematic, orderly arrangement and storage of letters, invoices, statements, catalogs, and other materials

______e. Process of separating names for the purpose of selecting the caption under which a record is to be filed

______f. Accurate, up-to-date listing of supplies needed

______g. Legal name of a person, whether it is usually used as an individual name, or as a part of a business name

______h. Arrangement of single letters or words, in order, according to A through Z

______i. Part of a name that is used in alphabetizing

______j. Notation in the index showing the record is filed somewhere else

______k. Last name of a person

______l. Surname and at least one given name or initial of a person

______m. Order in which the units of a name are arranged for filing

______n. Order in which a full name normally appears

1. Personal name
2. Surname
3. Given name
4. Full name
5. Natural order
6. Indexing
7. Indexing arrangement
8. Indexing unit
9. Coding
10. Filing order
11. Alphabetizing
12. Filing
13. Numeric filing
14. Credit slip
15. Running inventory
16. Cross-reference
17. Salutation

_____o. Process of marking the indexing units in a name to indicate the order in which the units will be filed

_____p. Assigning consecutive numbers to each correspondent or name having an individual folder

_____q. An expression of greeting

2. Select from the following list duties of the business office assistant. Mark each correct answer with an "X."

_____a. Files records and orders supplies

_____b. Types letters

_____c. Makes appointments

_____d. Gives injections

_____e. Transcribes letters and medical health reports

_____f. Renews narcotic prescriptions

_____g. Cleans windows

_____h. Greets patients

_____i. Sets up new patient file folders

_____j. Uses telephone efficiently

_____k. Reads doctor's personal mail

_____l. Opens, reads, and sorts incoming mail

_____m. Arranges social engagements for doctor

3. Select from the following list qualities of good telephone manner. Mark each correct answer with an "X."

_____a. Interest

_____b. Helpfulness

_____c. Sarcasm

_____d. Pleasantness

_____e. Promptness

_____f. Politeness

_____g. Sense of humor

4. Describe factors that contribute to the success of a professional call.

   a. Choice of words--____

   ____

   ____

   ____

   b. Tone of voice--____

   ____

   ____

   ____

   c. Closure of conversation--________________________________

   ____

   ____

   ____

5. Describe procedures for types of appointments.

   a. New patient--____

   ____

   b. Recall appointment--_____________________________________

   ____

   c. Sales representative--___________________________________

   ____

   d. School children--____

   ____

6. Select from the following list necessary information for the appointment book. Mark each correct answer with an "X."

   _____a. Patient's telephone number

   _____b. Patient's full name

   _____c. Patient's spouse's name

   _____d. Patient's insurance company

______ e. Patient's employer

______ f. Patient's work or office address

______ g. Time of appointment

______ h. Purpose of appointment

______ i. Work to be done

______ j. When recall appointment should be scheduled

7. List requirements for appointment book entries.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

8. Arrange in order the proper sequence for making appointments. Write a "1" before the first step, a "2" before the second step, and so on, in the blanks provided.

______ a. Write appointment card for patient

______ b. Complete entry in pencil in units of time

______ c. Double check appointment card and appointment book

9. Match types of files to the correct systems. Place the correct numbers in the blanks provided.

______ a. Filed chronologically by month

______ b. Maintained in a subject file

______ c. Card file organized alphabetically; color-coded by month

______ d. Kept together in a file folder or envelope and filed alphabetically or numerically

______ e. Kept alphabetically or in patient's record file

1. Patient's record file
2. Business record file
3. Recall file
4. Radiography file
5. Come-up file

10. Select from the following list types of filing systems used in the medical office. Mark each correct answer with an "X."

______ a. Numeric

______ b. Subject

______ c. Sex

______d. Alphabetic

______e. Chronologic

______f. Tapes

11. State rules for filing alphabetically by indexing.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

12. Match parts of a numeric filing system to the correct descriptions. Place the correct numbers in the blanks provided.

______a. Contains names or subjects that are arranged alphabetically

______b. Contains individual folders with numeric captions

______c. Contains several folders bearing alphabetic captions

1. Main numeric file
2. Miscellaneous alphabetic file
3. Card index

13. Distinguish between types of medical supplies. Write an "E" before expendable items, an "N" before nonexpendable items, and a "C" before capital supplies.

______a. Reusable items that are not of major cost

______b. Items that are consumed or used up in services

______c. Costly items that are seldom replaced

14. Describe methods of controlling supplies.

____

____

____

15. Arrange in order steps to verify supplies. Write a "1" before the first step, a "2" before the second step, and so on, in the blanks provided.

______a. File invoice

______b. Check supplies received against invoice

______c. File back order slip

______d. Open supplies upon arrival

16. Match terms associated with writing letters to the correct definitions. Place the correct numbers in the blanks provided.

_____ a. "Good-bye" of the letter

_____ b. Written exchange of ideas between individuals, departments, or branches of one organization

_____ c. Month, date of the month, and year

_____ d. Opening greeting of the letter

_____ e. Firm's name, address, telephone number, and/or symbol identifying nature of firm's business; usually appears at top of stationery

_____ f. Process of presenting business information and data in report form

_____ g. Name, address, and company of the person to whom the letter is written

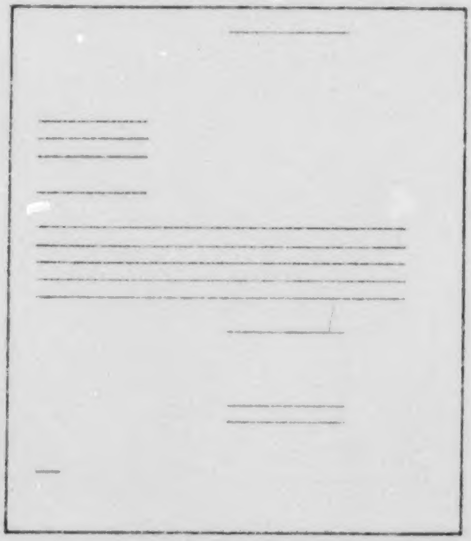
_____ h. All the material between the salutation and the complimentary close; the message

_____ i. Typed name and title of the person who signs the letter

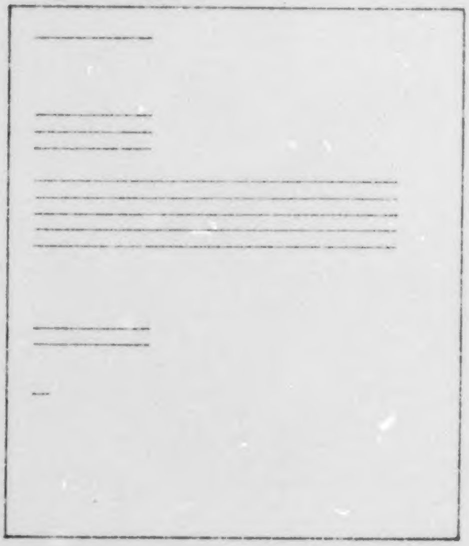
_____ j. Used to identify the typist and the person who signs the letter

1. Letterhead
2. Reference line
3. Date line
4. Signer's identification line
5. Inside address
6. Complimentary close
7. Salutation
8. Body
9. Memorandum (memo)
10. Formal report

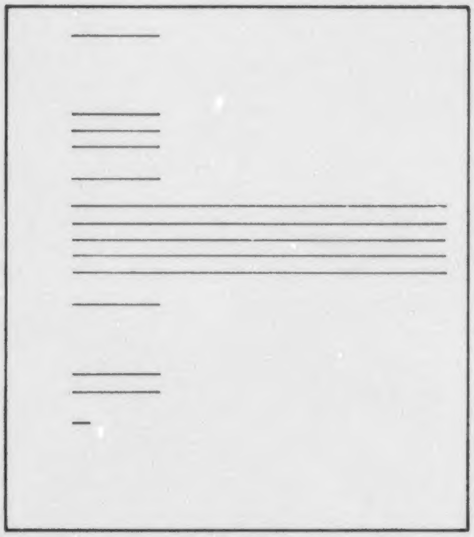
17. Label styles of letters shown in each of the following illustrations.



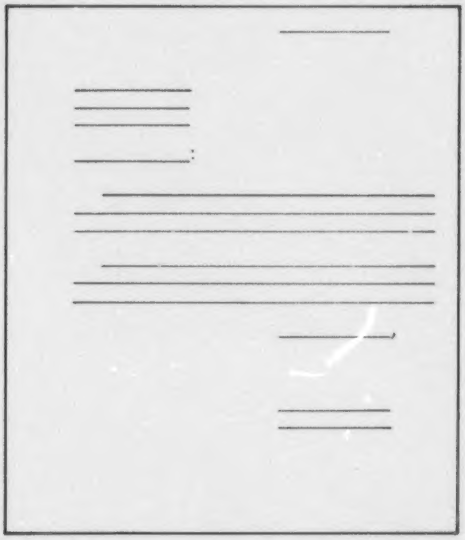
a. ______________________________



b. ______________________________



c. ______________________________



d. ______________________________

18. Match types of complimentary closes to the degree of their formality. Place the correct numbers in the blanks provided.

_____a. Sincerely yours
_____b. Cordially yours
_____c. Yours very truly
_____d. Respectfully yours
_____e. Yours cordially
_____f. Yours sincerely
_____g. Very truly yours
_____h. Yours respectfully
_____i. Yours very sincerely
_____j. Yours very cordially
_____k. Very respectfully yours
_____l. Yours very respectfully
_____m. Very sincerely yours
_____n. Very cordially yours

1. To show great respect
2. More personal and friendly
3. Somewhat less formal
4. Formal

19. Describe points to remember when transcribing letters.

20. Practice correct word usage.

21. Fill in appointment cards.

22. Index and type names.

23. Type words correctly.

24. Compose a business letter.

25. Care for incoming mail.

26. Order supplies.

27. Demonstrate the ability to use a transcriber.

(NOTE: If activities 20-27 have not been finished before the test, ask your instructor when they should be completed.)

SECRETARIAL PROCEDURES
UNIT IV

ANSWERS TO TEST

1. a. 10
   b. 14
   c. 3
   d. 12
   e. 6
   f. 15
   g. 1
   h. 11
   i. 8
   j. 16
   k. 2
   l. 4
   m. 7
   n. 5
   o. 9
   p. 13
   q. 17
2. a, b, c, e, h, i, j, l
3. a, b, d, e, f
4. Descriptions should include:
   a. 1) Give clear explanations
      2) Avoid slang expressions
      3) Use short, simple, descriptive words
      4) Use expressions of courtesy
      5) Use person's name often
   b. 1) Speak directly into mouthpiece
      2) Use normal conversational tone
      3) Speak clearly and distinctly
      4) Say it with a smile
   c. 1) Use courtesy
      2) Hang up gently

5. a. Descriptions should include:
    1) Usually appoint for examination for one hour
    2) Indicate in appointment book as new patient
   b. 1) Appoint patient for follow-up exam and/or treatment
    2) Call to inform patient of laboratory or X-ray results
   c. 1) Appoint sales representatives as your office advises
    2) Have order ready for review
   d. 1) Give preference to other appointments
    2) Schedule after school

6. a, b, g, h, i

7. a. Accurate
   b. Legible
   c. Complete
   d. Written in pencil

8. a. 2
   b. 1
   c. 3

9. a. 5
   b. 2
   c. 3
   d. 1
   e. 4

10. a, b, d, e

11. a. Individual name indexed with last name (surname)
   b. Last name followed by first name (given name)
   c. First name followed by middle name or initial
   d. Surname with initial before surnames with a first name

12. a. 3
    b. 1
    c. 2
13. a. N
    b. E
    c. C
14. Description should include:
    a. Check supplies off of checklist as used
    b. Use want list to record supplies needed
15. a. 3
    b. 2
    c. 4
    d. 1
16. a. 6
    b. 9
    c. 3
    d. 7
    e. 1
    f. 10
    g. 5
    h. 8
    i. 4
    j. 2
17. a. Modified block; open puncuation
    b. AMS (Administrative Management Society) simplified
    c. Blocked
    d. Modified block; indented with mixed or standard punctuation

18. a. 3
    b. 2
    c. 4
    d. 1
    e. 2
    f. 3
    g. 4
    h. 1
    i. 3
    j. 2
    k. 1
    l. 1
    m. 3
    n. 2

19. Description should include:

    a. Carefully review all instructions before typing

    b. Type only what you clearly understand; when in doubt, ask

    c. Return dictation marked "rush" as it is transcribed

    d. Use correspondence folders for proper handling of all correspondence materials

    e. Erase cassettes only after typed material has been checked and signed by the originator

    f. Make certain the originator has a sufficient supply of cassettes

    g. Type envelope exactly like inside address

    h. Check to make sure enclosures, attachments, and specified number of copies have been included in envelope

20. Evaluated to the satisfaction of the instructor

21. Evaluated to the satisfaction of the instructor

22. Evaluated to the satisfaction of the instructor

23. Evaluated to the satisfaction of the instructor

24. Evaluated to the satisfaction of the instructor

25. Evaluated to the satisfaction of the instructor

26. Evaluated to the satisfaction of the instructor

27. Performance skills evaluated to the satisfaction of the instructor

BUSINESS PROCEDURES
UNIT V

UNIT OBJECTIVE

After completion of this unit, the student should be able to handle business transactions carried out in the medical office. The student should also be able to use two types of bookkeeping systems and fill out all business forms needed. This knowledge will be evidenced through completion of the assignment sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with business procedures to the correct definitions
2. Describe requirements of the bookkeeping assistant.
3. List ways in which patients' accounts are handled.
4. Match types of bookkeeping systems to the correct descriptions.
5. Complete a chart on steps to follow through a collection system.
6. Select from a list items listed on the charge slip and ledger
7. Arrange in order steps in using the daily log/journal page.
8. Arrange in order steps used to balance the daily log/journal page.
9. Identify parts of a pegboard system.
10. List methods of balancing daily log/journal page in the pegboard system.
11. Match special entries in bookkeeping systems to the correct definitions.
12. Describe steps in making a bank deposit.
13. Select from a list items that appear on a monthly expense sheet.
14. Select from a list items found on record of employees' salaries and tax deductions.
15. Describe the process of depositing withheld income tax and Social Security (FICA).
16. Identify parts of a check.

17. Select from a list items that are needed on a check stub.
18. Arrange in order steps in reconciling bank statements.
19. Describe handling of petty cash.
20. Distinguish between types of insurance programs.
21. State points to consider when filling out insurance forms.
22. Select from a list basic information found on insurance claims.
23. Compose collection letters.
24. Complete charge slip, daily log journal, ledger sheet, and receipt.
25. Practice pegboard system.
26. Balance daily log in pegboard system.
27. Figure courtesy discounts.
28. Prepare a bank deposit.
29. Prepare monthly expense sheet.
30. Prepare yearly summary sheet.
31. Prepare record of employees' salaries and tax deductions.
32. Write a check and complete check stub.
33. Reconcile bank statement.
34. Complete petty cash summary.
35. Complete insurance form.

BUSINESS PROCEDURES
UNIT V

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide student with objective sheet.

   B. Provide student with information and assignment sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information and assignment sheets.

   F. Provide students with materials for assignment sheets.

   G. Provide sample collection letters for students to use with Assignment Sheet #1. Discuss types of collection letters, then have students type them in block or semi-block form to increase their typing speed; this will also give students a chance to practice form letters.

   H. Teach students bookkeeping process using the credit card, if it is used in your area.

   I. Invite a bank employee to speak with students.

      Examples: Writing checks, making deposits, methods of routing checks from one bank to another

   J. Lead a discussion on handling checks returned due to insufficient funds.

   K. Discuss bank charge for returned checks.

   L. Have students go to post office and get form to be completed for his or her social security number, if they do not already have one.

   M. Invite a person who prepares income tax forms to speak with the students on forms they will need to fill out.

      Example: Taxes taken out of salary; preparing income tax forms

   N. Contact companies that produce pegboard systems to demonstrate the use of their products and/or provide sample copies.

   O. Invite various insurance groups to speak to class on various forms needed and demonstrate processes.

      Examples: Champus, worker's compensation

   P. Give test.

II. Instructional materials:

- A. Objective sheet
- B. Information sheet
- C. Transparency masters
  1. TM 1--Petty Cash Fund
  2. TM 2--Petty Cash Summary
- D. Assignment sheets
  1. Assignment Sheet #1--Compose Collection Letters
  2. Assignment Sheet #2--Complete Charge Slip, Daily Log Journal, Ledger Sheet, and Receipt
  3. Assignment Sheet #3--Practice Pegboard System
  4. Assignment Sheet #4--Balance Daily Log in Pegboard System
  5. Assignment Sheet #5--Figure Courtesy Discounts
  6. Assignment Sheet #6--Prepare a Bank Deposit
  7. Assignment Sheet #7--Prepare Monthly Expense Sheet
  8. Assignment Sheet #8--Prepare Yearly Summary Sheet
  9. Assignment Sheet #9--Prepare Record of Employees' Salaries and Tax Deductions
  10. Assignment Sheet #10--Write a Check and Complete Check Stub
  11. Assignment Sheet #11--Reconcile Bank Statement
  12. Assignment Sheet #12--Complete Petty Cash Summary
  13. Assignment Sheet #13--Complete Insurance Form
- D. Answers to assignment sheets
- E. Test
- F. Answers to test

III. Unit references:

- A. Ladley, Betty A., and Patt, Jerry Crowe. *Office Procedures for the Dental Team.* St. Louis, Missouri: C.V. Mosby Co., 1977.
- B. Ehrlich, Ann. *Business Administration for the Dental Assistant.* 2nd ed. Champaign, Illinois: Colwell Co., 1972.

C. Carpenter, Corrine K., and Volpe, Margaret E. *Workbook for Dental Records.* New Jersey State Department of Education, 1972.

D. Cooper, Marian G., and Bredow, Miriam. *The Medical Assistant*. 4th ed. New York: McGraw-Hill Book Co. 1978.

E. Cunningham, Harold. *The 30 Best Collection Letters With Proven Results.* Financial Business Systems, 1975.

F. Serviss, Emalee. *Banking and Savings and Loan.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

BUSINESS PROCEDURES
UNIT V

INFORMATION SHEET

I. Terms and definitions:

A. Business procedures--System of recording and summarizing all financial transactions

B. Accounts receivable--Involves management of all fees charged and payments received

C. Accounts payable--Involves management of all expenses paid out for operation of an office

D. Charge slip--Form showing patient's name, services rendered, and fee charged

(NOTE: In some offices the ledger card is used in place of a charge slip.)

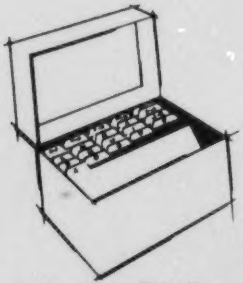
E. Receipt--Gives acknowledgment for cash paid; written in duplicate form

F. Statement--Form showing amount owed; usually sent out the last of each month

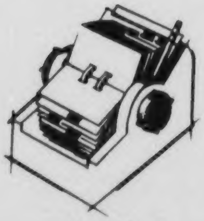
G. Ledger--Permanent individual patient form that shows charges, payments, services rendered, and balance due

(NOTE: Various ways of managing ledgers include index cards filed in boxes or rotary file, visible sliding trays, self-file, looseleaf and bound books.)

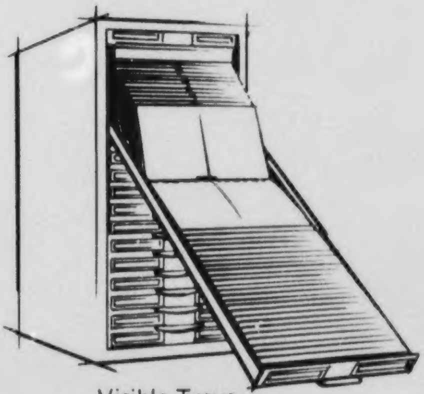
Examples:



Index Card File Box



Rotary File



Visible Trays

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INFORMATION SHEET

H. Daily log/journal--Permanent record that shows all patients' names, services rendered, total fees charged, and payments received

I. Monthly expense sheet--Permanent record of all expenditures for any given month

J. Yearly summary--Permanent record showing each month's expenditures, charges and receipts, and yearly total for each

K. Bank deposit--Total amount of cash and checks prepared for safekeeping

L. Deposit slip--Itemized list of cash and other funds entered to bank account for credit

M. Endorsement--Signature on an official document

N. Account age--Refers to length of time that charges are overdue

(NOTE: Unless arrangements have been made to pay account before 30 days, a regular statement will be sent.)

O. Petty cash--Money used for miscellaneous office expenses

P. Health insurance-Financial coverage purchased through various companies to assist in payment of unexpected health expenses

Q. Social Security card--Numbered identification given to individuals by the government; used by employers and the Federal government as a reference for contributing funds for earnings insurance

(NOTE: When earnings stop or person retires, monthly cash benefits are paid back to replace part of the earnings the person or family has lost.)

R. Employer identification number--Assigned to employer by Internal Revenue Service to be used in their accounting process

INFORMATION SHEET

S. Employee's earnings record–Summary of employee's earnings to be recorded quarterly for office files or reporting to government

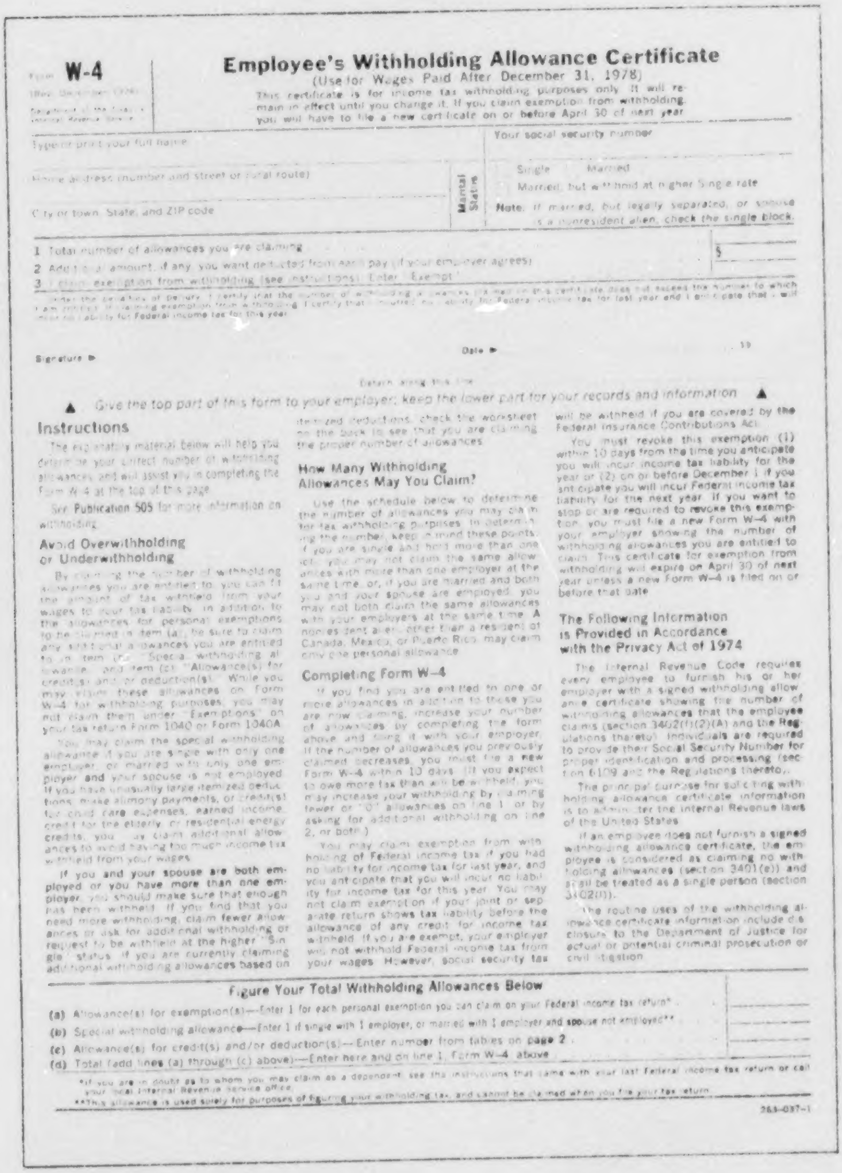
EARNINGS RECORD – SOCIAL SECURITY – WITHHOLDING

NAME SOCIAL SEC. NO. EXEMPTIONS

DATE PAID	PERIOD PAID FOR			WITHHOLDING		FICA		OTHER PAY DEDUCTIONS				NET SALARY	
TOTAL JAN.													
TOTAL FEB.													
TOTAL MAR.													
TOTAL 1st QTR.													
TOTAL APRIL													
TOTAL MAY													
TOTAL JUNE													
TOTAL 2nd QTR.													
TOTAL HALF YEAR													

INFORMATION SHEET

T. Employee's withholding certificate (Form W-4)--Completed by employee to determine withholding allowances for income tax purposes



Form **W-4**
(Rev. December 1978)
Department of the Treasury
Internal Revenue Service

Employee's Withholding Allowance Certificate

(Use for Wages Paid After December 31, 1978)

This certificate is for income tax withholding purposes only. It will remain in effect until you change it. If you claim exemption from withholding, you will have to file a new certificate on or before April 30 of next year.

Type or print your full name
Your social security number
Home address (number and street or rural route)
City or town, State, and ZIP code

Marital Status
☐ Single ☐ Married
☐ Married, but withhold at higher Single rate
Note: *If married, but legally separated, or spouse is a nonresident alien, check the single block.*

1 Total number of allowances you are claiming
2 Additional amount, if any, you want deducted from each pay (if your employer agrees) $
3 I claim exemption from withholding (see instructions). Enter "Exempt"

Under the penalties of perjury, I certify that the number of withholding allowances claimed on this certificate does not exceed the number to which I am entitled. If claiming exemption from withholding, I certify that I incurred no liability for Federal income tax for last year and I anticipate that I will incur no liability for Federal income tax for this year.

Signature ▶ **Date ▶** , 19

Detach along this line

▲ *Give the top part of this form to your employer; keep the lower part for your records and information* ▲

Instructions

The explanatory material below will help you determine your correct number of withholding allowances, and will assist you in completing the Form W-4 at the top of this page.

See **Publication 505** for more information on withholding.

Avoid Overwithholding or Underwithholding

By claiming the number of withholding allowances you are entitled to, you can fit the amount of tax withheld from your wages to your tax liability. In addition to the allowances for personal exemptions to be claimed in item (a), be sure to claim any additional allowances you are entitled to in item (b), "Special withholding allowance," and item (c), "Allowance(s) for credit(s) and/or deduction(s)." While you may claim these allowances on Form W-4 for withholding purposes, you may not claim them under "Exemptions" on your tax return Form 1040 or Form 1040A.

You may claim the special withholding allowance if you are single with only one employer, or married with only one employer and your spouse is not employed. If you have unusually large itemized deductions, make alimony payments, or credit(s) for child care expenses, earned income credit for the elderly, or residential energy credits, you may claim additional allowances to avoid having too much income tax withheld from your wages.

If you and your spouse are both employed or you have more than one employer, you should make sure that enough has been withheld. If you find that you need more withholding, claim **fewer allowances** or ask for additional withholding or request to be withheld at the higher "Single" status. If you are currently claiming additional withholding allowances **based on** itemized deductions, check the worksheet on the back to see that you are claiming the proper number of allowances.

How Many Withholding Allowances May You Claim?

Use the schedule below to determine the number of allowances you may claim for tax withholding purposes. In determining the number, keep in mind these points: If you are single and hold more than one job, you may not claim the same allowances with more than one employer at the same time; or, if you are married and both you and your spouse are employed, you may not both claim the same allowances with your employers at the same time. A nonresident alien, other than a resident of Canada, Mexico, or Puerto Rico, may claim only one personal allowance.

Completing Form W-4

If you find you are entitled to one or more allowances in addition to those you are now claiming, increase your number of allowances by completing the form above and filing it with your employer. If the number of allowances you previously claimed decreases, you must file a **new** Form W-4 within 10 days. (If you **expect** to owe more tax than will be withheld, you may increase your withholding by claiming fewer or "0" allowances on line 1, or by asking for additional withholding on line 2, or both.)

You may claim exemption from withholding of Federal income tax if you had no liability for income tax for last year, and you anticipate that you will incur no liability for income tax for this year. You may not claim exemption if your joint or separate return shows tax liability before the allowance of any credit for income tax withheld. If you are exempt, your employer will not withhold Federal income tax from your wages. However, social security tax will be withheld if you are covered by the Federal Insurance Contributions Act.

You must revoke this exemption (1) within 10 days from the time you anticipate you will incur income tax liability for the year or (2) on or before December 1 if you anticipate you will incur Federal income tax liability for the next year. If you want to stop or are required to revoke this exemption, you must file a new Form W-4 with your employer showing the number of withholding allowances you are entitled to claim. This certificate for exemption from withholding will expire on April 30 of next year unless a new Form W-4 is filed on or before that date.

The Following Information is Provided in Accordance with the Privacy Act of 1974

The Internal Revenue Code requires every employee to furnish his or her employer with a signed withholding allowance certificate showing the number of withholding allowances that the employee claims (section 3402(f)(2)(A) and the Regulations thereto). Individuals are required to provide their Social Security Number for proper identification and processing (section 6109 and the Regulations thereto).

The principal purpose for soliciting withholding allowance certificate information is to administer the Internal Revenue laws of the United States.

If an employee does not furnish a signed withholding allowance certificate, the employee is considered as claiming no withholding allowances (section 3401(e)) and shall be treated as a single person (section 3402(l)).

The routine uses of the withholding allowance certificate information include disclosure to the Department of Justice for actual or potential criminal prosecution or civil litigation.

Figure Your Total Withholding Allowances Below

(a) Allowance(s) for exemption(s)—Enter 1 for each personal exemption you can claim on your Federal income tax return*
(b) Special withholding allowance—Enter 1 if single with 1 employer, or married with 1 employer and spouse not employed**
(c) Allowance(s) for credit(s) and/or deduction(s)—Enter number from tables on **page 2**
(d) Total (add lines (a) through (c) above)—Enter here and on line 1, Form W-4 above

*If you are in doubt as to whom you may claim as a dependent, see the instructions that came with your last Federal income tax return or call your local Internal Revenue Service office.

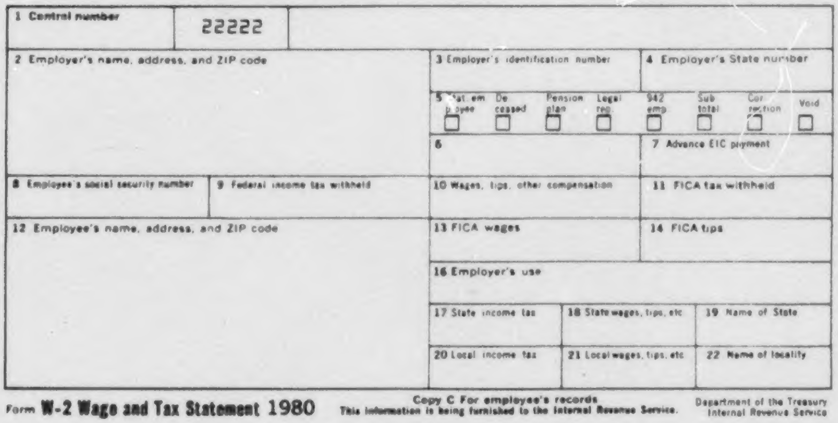
**This allowance is used solely for purposes of figuring your withholding tax, and cannot be claimed when you file your tax return.

263-037-1

INFORMATION SHEET

U. Wage and tax statement (Form W-2)--Total of all wages paid and deductions withheld from the employee; to be used in filing income tax

(NOTE: This form for a calendar year is provided for each employee no later than January 31 of the following year.)



1 Control number 22222

2 Employer's name, address, and ZIP code

3 Employer's identification number

4 Employer's State number

5 Stat. employee ☐ Deceased ☐ Pension plan ☐ Legal rep. ☐ 942 emp ☐ Sub total ☐ Correction ☐ Void ☐

6

7 Advance EIC payment

8 Employee's social security number

9 Federal income tax withheld

10 Wages, tips, other compensation

11 FICA tax withheld

12 Employee's name, address, and ZIP code

13 FICA wages

14 FICA tips

16 Employer's use

17 State income tax

18 State wages, tips, etc

19 Name of State

20 Local income tax

21 Local wages, tips, etc

22 Name of locality

Form **W-2 Wage and Tax Statement 1980**

Copy C For employee's records
This information is being furnished to the Internal Revenue Service.

Department of the Treasury
Internal Revenue Service

V. Federal unemployment tax--Type of payment that doctor makes if he or she employs more than four people in office

(NOTE: The tax is a percentage of wages paid and applies to the first specified amount of wages paid during the calendar year. This tax must be computed on a quarterly basis and a deposit should be made each month. The specified amount changes from year to year. Obtain a copy of projected changes from your local Social Security Office.)

W. Worker's compensation insurance--Policy that reimburses an employer for damages that he/she is required to pay an employee who has been hurt on the job

X. Federal Truth in Lending Act--Law passed to inform consumers of the cost of borrowing and purchasing on credit

II. Requirements of the bookkeeping assistant

A. Develop an accurate, routine system of keeping accounts

B. Give complete and careful attention to every detail

C. Provide accurate account of records and money involved

INFORMATION SHEET

D. Show ethical responsibility when handling confidential information

(NOTE: Under no circumstances should you violate that trust; do not discuss with anyone, except your doctor, matters relating to the office practice.)

Example: "Did you know the Hefners have not paid on their account for three months and they owe the doctor $500.00? I think we are going to have to turn them over to the collection agency."

III. Ways in which patients' accounts are handled

A. Patients pay cash

B. Patients are billed monthly

C. Bills are sent as soon as patient is discharged

D. Patients pay fixed amount weekly or monthly

(NOTE: Fixed amount will be paid regardless of charges made in that week or month.)

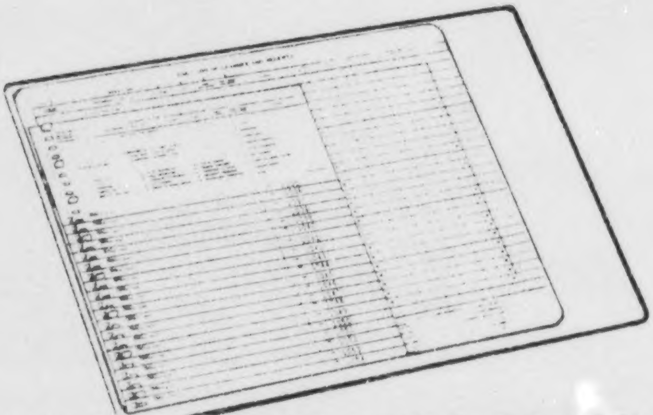
E. Bills are charged on credit cards

F. Bills are paid by health insurance

IV. Types of bookkeeping systems

A. Traditional log system--Requires separate written entries on a ledger card, daily receipt and log sheet

B. Pegboard (write-it-once)--Provides one entry on charge slip, daily journal, ledger card, receipt, appointment notice, and in some instances, a statement



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INFORMATION SHEET

C. Data processing--Involves use of computers and codes for procedures

Example: OC--Office Call

V. Steps to follow through a collection system (Assignment Sheet #1)

ACCOUNT AGE	COLLECTION ACTION
End of the month or 30 days	Send the usual statement; this account is not yet "overdue"
60 days	Mail a second statement with a gently phrased reminder added by hand or typed; a preprinted card, form letter, or sticker are easier, but less efffective, alternatives
74 days	Make the first telephone contact with the responsible person
90 days	Send a stronger letter or collection form, definitely asking for prompt attention (NOTE: If no response at this time, account will be turned over to collection agency. If amount due is $20 or more case may be taken to small claims court.)

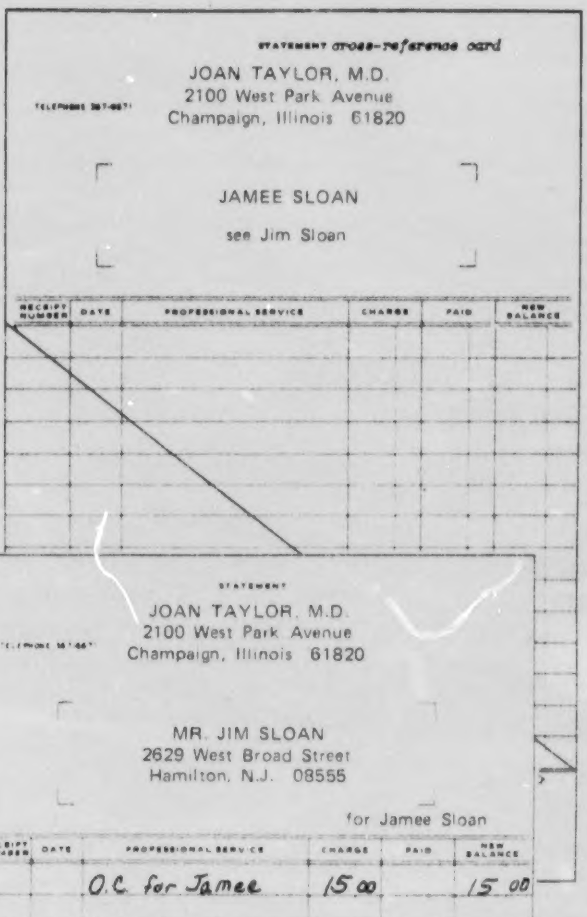
INFORMATION SHEET

VI. Items listed on charge slip and ledger (Assignment Sheet #2)

A. Date

B. Complete name, including first and middle names

(NOTE: Name shown at the top of the slip will be the person responsible for the account. Spouse's name is used for cross reference.)



STATEMENT *cross-reference card*

JOAN TAYLOR, M.D.
2100 West Park Avenue
Champaign, Illinois 61820

JAMEE SLOAN

see Jim Sloan

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE	PAID	NEW BALANCE

STATEMENT

JOAN TAYLOR, M.D.
2100 West Park Avenue
Champaign, Illinois 61820

MR. JIM SLOAN
2629 West Broad Street
Hamilton, N.J. 08555

for Jamee Sloan

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE	PAID	NEW BALANCE
		O.C. for Jamee	15 00		15 00

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INFORMATION SHEET

C. Patient's address

D. Services rendered

(NOTE: This information may be written out or coded according to system being used.)

E. Itemized amount charged for services rendered

F. Total amount

(NOTE: Some of the systems may show the total charge amount, the amount paid, and the new balance.)

VII. Steps in using the daily log/journal page (Assignment Sheet #2)

A. Enter information and charges from charge slip to patient ledger card during each visit

B. Enter information from patient ledger card to daily log/journal

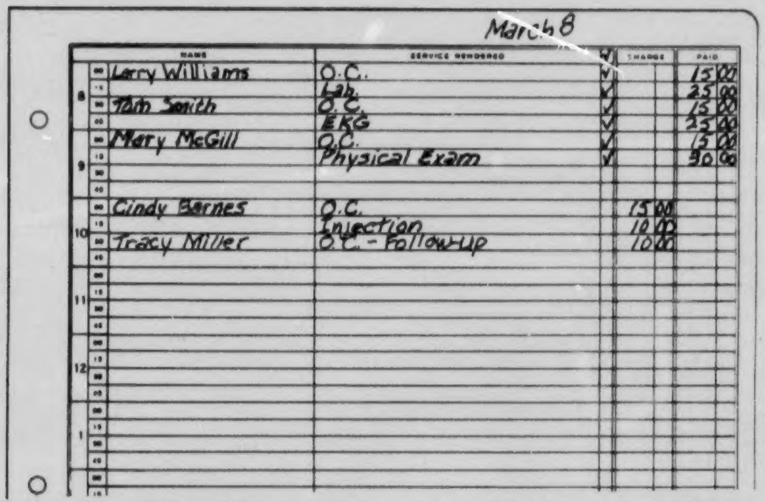
(NOTE: When a series of visits will be needed for a specific service, the total fee is charged in full at the first visit. A "C" for charged or contract is listed in the charge column and payments are listed in the paid column.)

Examples: Obstetricians' package plans, allergist

C. Enter any payment received on account on the individual ledger cards, then on daily journal pages as "on account"

D. Place a checkmark in column by name to indicate that information has been transferred to ledger card

Example:



March 8

NAME	SERVICE RENDERED	✓	CHARGE	PAID
Larry Williams	O.C.	✓		15 00
	Lab.	✓		25 00
Tom Smith	O.C.	✓		15 00
	EKG	✓		25 00
Mary McGill	O.C.	✓		15 00
	Physical Exam	✓		30 00
Cindy Barnes	O.C.		15 00	
	Injection		10 00	
Tracy Miller	O.C. - Follow-up		10 00	

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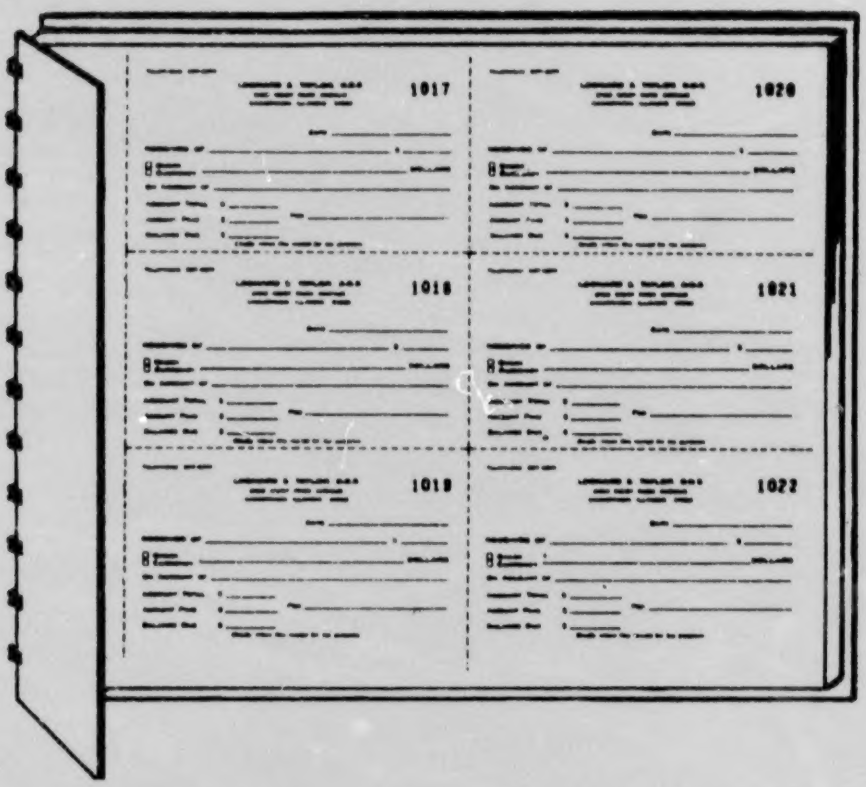
INFORMATION SHEET

E. Give a receipt for payment if requested

(NOTE: Some offices use receipts as a double check in the bookkeeping system.)



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VIII. Steps used to balance daily log/journal page

A. Check appointment book to see that all patients' visits have been listed in daily log/journal page

B. Make sure that there is a checkmark for each entry

C. Total charge column for amount of day's production

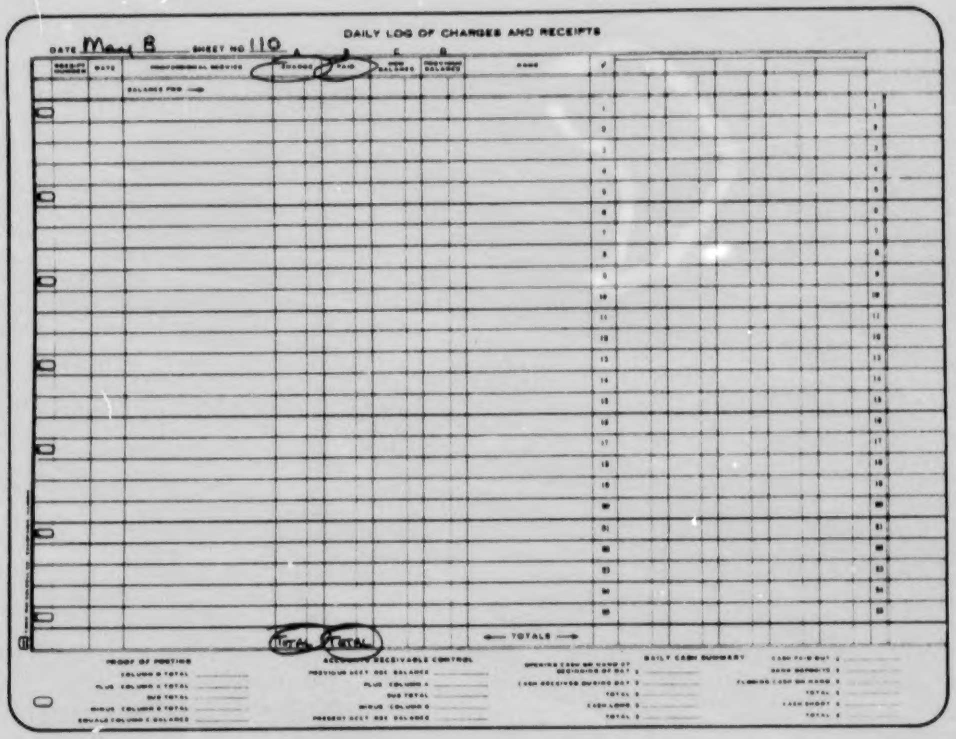
D. Total paid column

(NOTE: This sum should equal the amount of checks and currency to be deposited daily.)

INFORMATION SHEET

E. Bring totals from the charge and paid columns forward to next page for balance forward

Example:

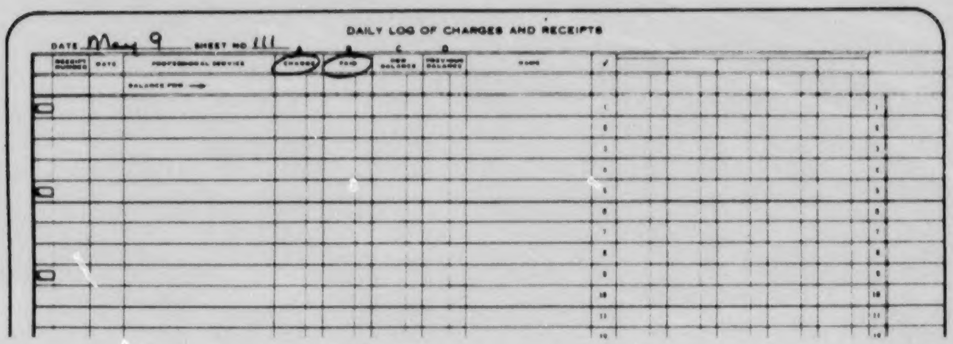


DAILY LOG OF CHARGES AND RECEIPTS

DATE May 8 SHEET NO 110

TOTAL TOTAL

← TOTALS →



DAILY LOG OF CHARGES AND RECEIPTS

DATE May 9 SHEET NO 111

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INFORMATION SHEET

IX. Parts of pegboard system (Assignment Sheet #3)

A. Fold-a-Log pegboard

(NOTE: The pegboard is usually made of lightweight aluminum or plastic and has a row of pegs along the left side of board to hold sheets secure.)

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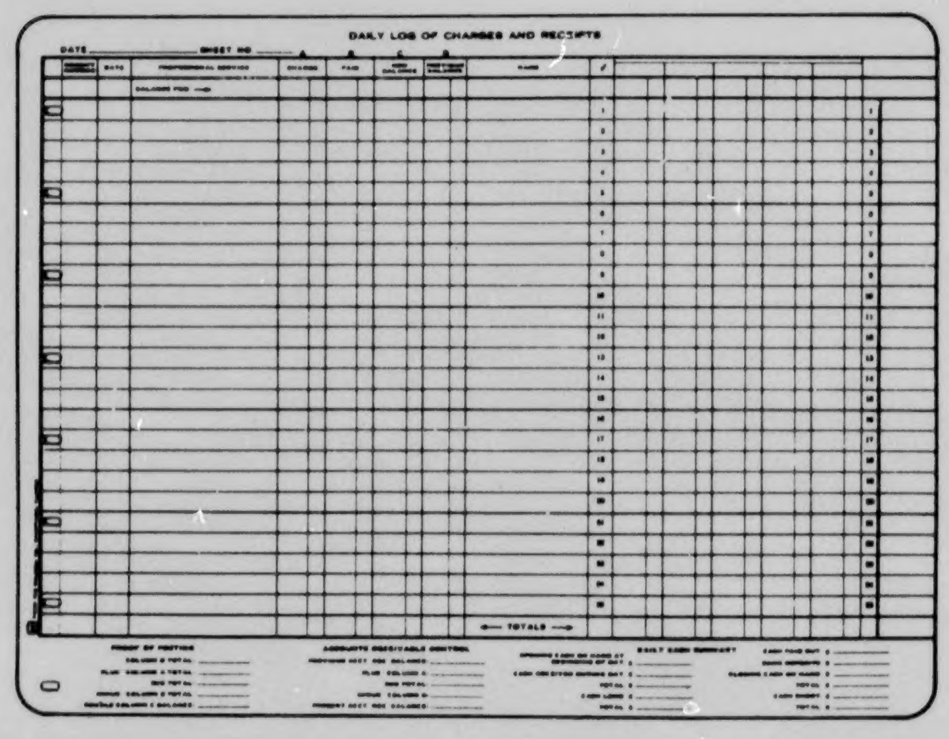
INFORMATION SHEET

B. Daily log of charges and receipts (daily journal page)



DAILY LOG OF CHARGES AND RECEIPTS

DATE ____________ SHEET NO ______

← TOTALS →

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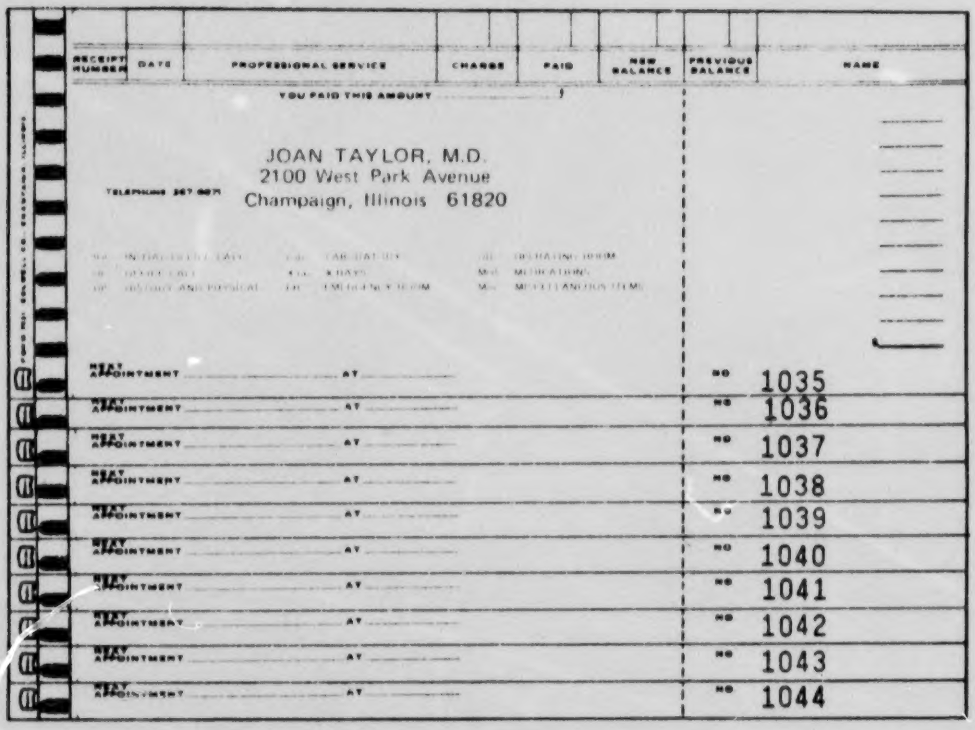
INFORMATION SHEET

C. Pegboard receipt and charge slip

(NOTE: The receipt also can be used to make the next appointment notice.)



RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE	PAID	NEW BALANCE	PREVIOUS BALANCE	NAME

YOU PAID THIS AMOUNT

JOAN TAYLOR, M.D.
2100 West Park Avenue
Champaign, Illinois 61820

NEXT APPOINTMENT ______ AT ______ NO 1035
NEXT APPOINTMENT ______ AT ______ NO 1036
NEXT APPOINTMENT ______ AT ______ NO 1037
NEXT APPOINTMENT ______ AT ______ NO 1038
NEXT APPOINTMENT ______ AT ______ NO 1039
NEXT APPOINTMENT ______ AT ______ NO 1040
NEXT APPOINTMENT ______ AT ______ NO 1041
NEXT APPOINTMENT ______ AT ______ NO 1042
NEXT APPOINTMENT ______ AT ______ NO 1043
NEXT APPOINTMENT ______ AT ______ NO 1044

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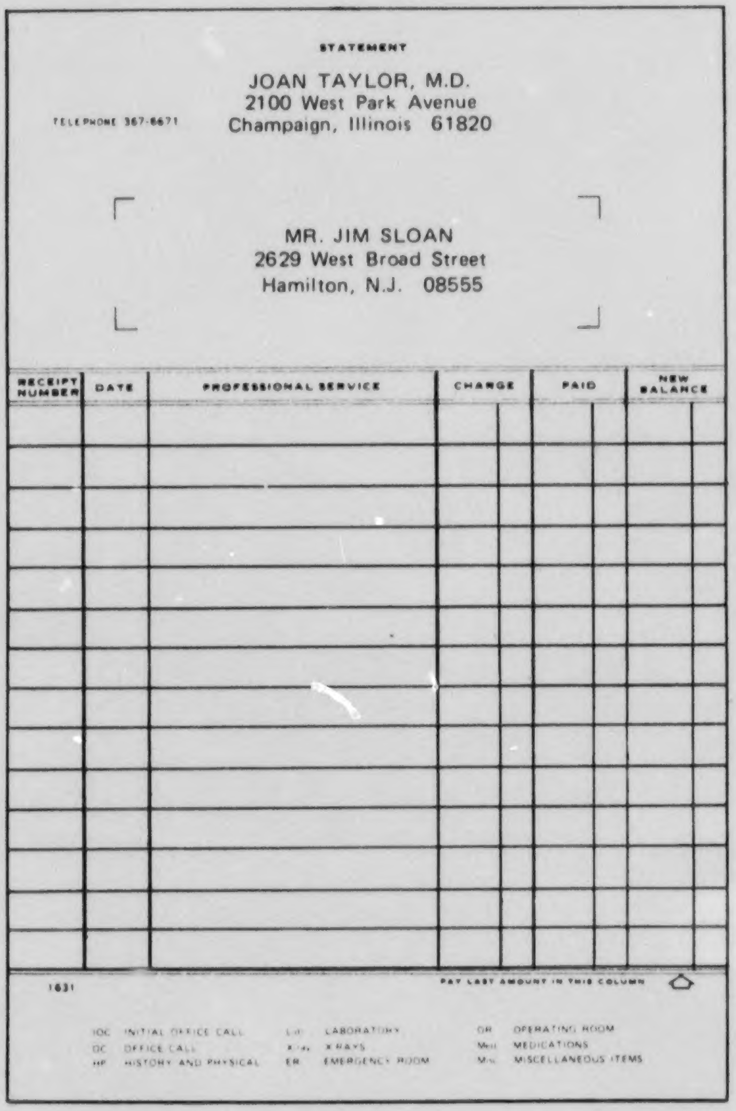
INFORMATION SHEET

D. Ledger card



STATEMENT

JOAN TAYLOR, M.D.
2100 West Park Avenue
Champaign, Illinois 61820

TELEPHONE 367-6671

MR. JIM SLOAN
2629 West Broad Street
Hamilton, N.J. 08555

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE	PAID	NEW BALANCE

1631

PAY LAST AMOUNT IN THIS COLUMN ⇧

IOC	INITIAL OFFICE CALL	Lab	LABORATORY	OR	OPERATING ROOM
OC	OFFICE CALL	X-ray	X RAYS	Med	MEDICATIONS
HP	HISTORY AND PHYSICAL	ER	EMERGENCY ROOM	Misc	MISCELLANEOUS ITEMS

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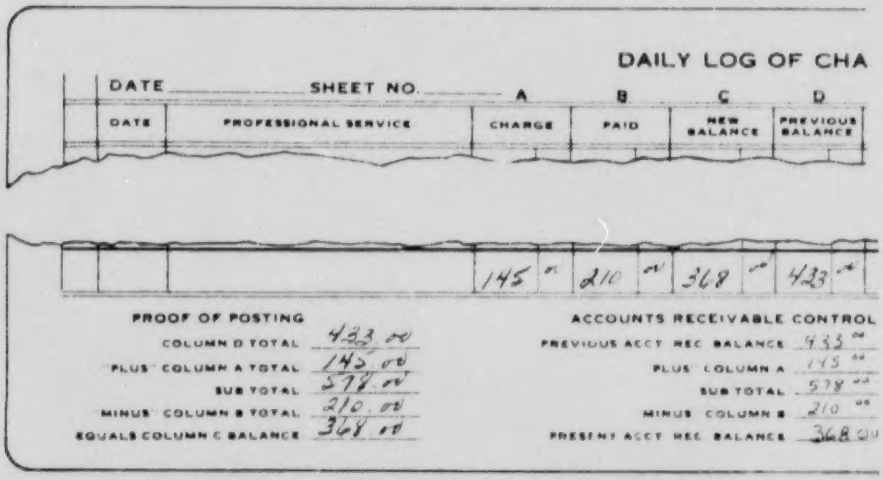
INFORMATION SHEET

X. Methods of balancing daily log journal page in the pegboard system (Assignment Sheet #4)

(NOTE: This is a double check for you to see if your figures balance.)

A. Proof of posting



DAILY LOG OF CHA

DATE ________ SHEET NO. ________

	DATE	PROFESSIONAL SERVICE	A CHARGE	B PAID	C NEW BALANCE	D PREVIOUS BALANCE
			145 00	210 00	368 00	423 00

PROOF OF POSTING

COLUMN D TOTAL	423.00
PLUS COLUMN A TOTAL	145.00
SUB TOTAL	578.00
MINUS COLUMN B TOTAL	210.00
EQUALS COLUMN C BALANCE	368.00

ACCOUNTS RECEIVABLE CONTROL

PREVIOUS ACCT REC BALANCE	433 00
PLUS COLUMN A	145 00
SUB TOTAL	578 00
MINUS COLUMN B	210 00
PRESENT ACCT REC BALANCE	368 00

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(NOTE: These columns will be found at the bottom of each daily log of charges sheet.)

B. Accounts receivable control

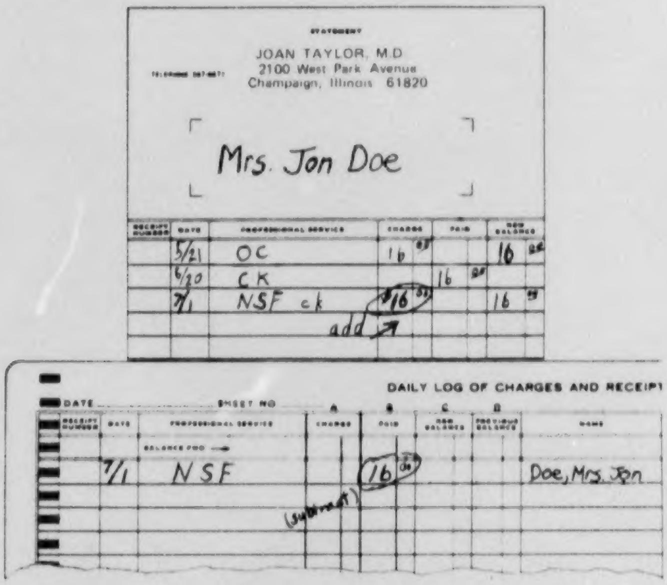
INFORMATION SHEET

XI. Special entries in bookkeeping systems (Assignment Sheet #5)

(NOTE: In every office there is a special noting system to keep records of these entries.)

A. Non-sufficient funds (NSF)--Check returned by bank due to lack of funds in account

Example:



STATEMENT

JOAN TAYLOR, M.D.
2100 West Park Avenue
Champaign, Illinois 61820

Mrs. Jon Doe

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE	PAID	NEW BALANCE
	5/21	OC	16 00		16 00
	6/20	CK		16 00	
	7/1	NSF ck	$16 00		16 00

add

DAILY LOG OF CHARGES AND RECEIPT

DATE ____ SHEET NO ____

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	A CHARGE	B PAID	C NEW BALANCE	D PREVIOUS BALANCE	NAME
		BALANCE FWD →					
	7/1	NSF		16 00			Doe, Mrs. Jon

(subtract)

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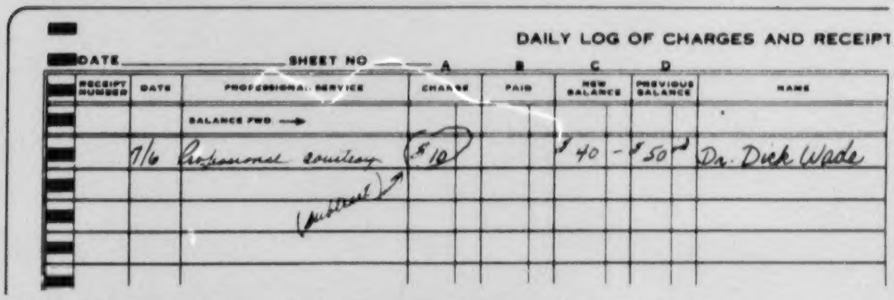
B. Courtesy discount--Special fee given to selected patients or professionals

(NOTE: A predetermined percentage of the usual fee will be subtracted from amount paid.)

Example:



DAILY LOG OF CHARGES AND RECEIPT

DATE ____ SHEET NO ____

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	A CHARGE	B PAID	C NEW BALANCE	D PREVIOUS BALANCE	NAME
		BALANCE FWD →					
	7/6	Professional courtesy	$10		$40 -	$50 00	Dr. Dick Wade

(subtract)

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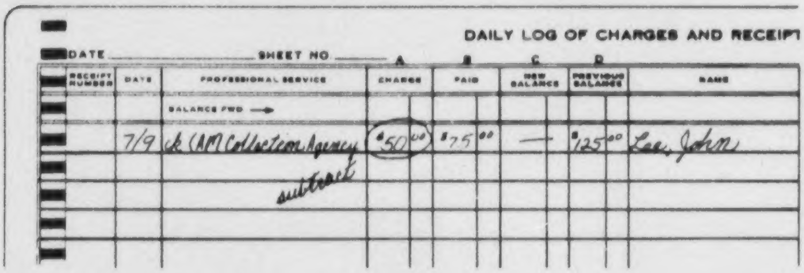
INFORMATION SHEET

C. Collection agency payment--Money received from business hired to collect overdue accounts

Example:



DAILY LOG OF CHARGES AND RECEIPT

DATE ____________ SHEET NO ______

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	A CHARGE	B PAID	C NEW BALANCE	D PREVIOUS BALANCE	NAME
		BALANCE FWD →					
	7/9	ck (AM Collection Agency	$50 00	$75 00	—	$125 00	Lee, John
		subtract					

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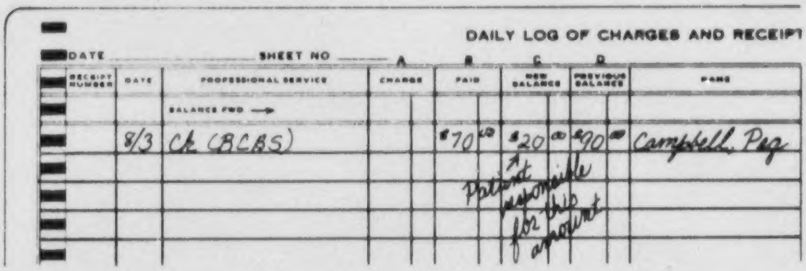
(NOTE: When account is turned over to an agency for collection, a percentage of the money will be kept by the agency.)

D. Insurance claims--Partial or full payment to office from patient's coverage

Example:



DAILY LOG OF CHARGES AND RECEIPT

DATE ____________ SHEET NO ______

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	A CHARGE	B PAID	C NEW BALANCE	D PREVIOUS BALANCE	NAME
		BALANCE FWD →					
	8/3	Ck (BCBS)		$70 00	$20 00	$90 00	Campbell, Peg

Patient responsible for this amount

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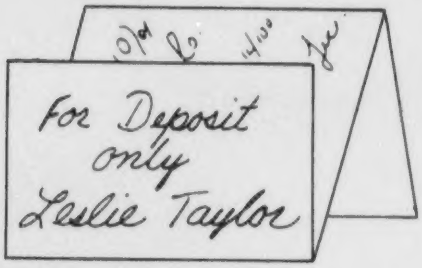
INFORMATION SHEET

XII. Steps in making bank deposit (Assignment Sheet #6, Transparencies 1 and 2)

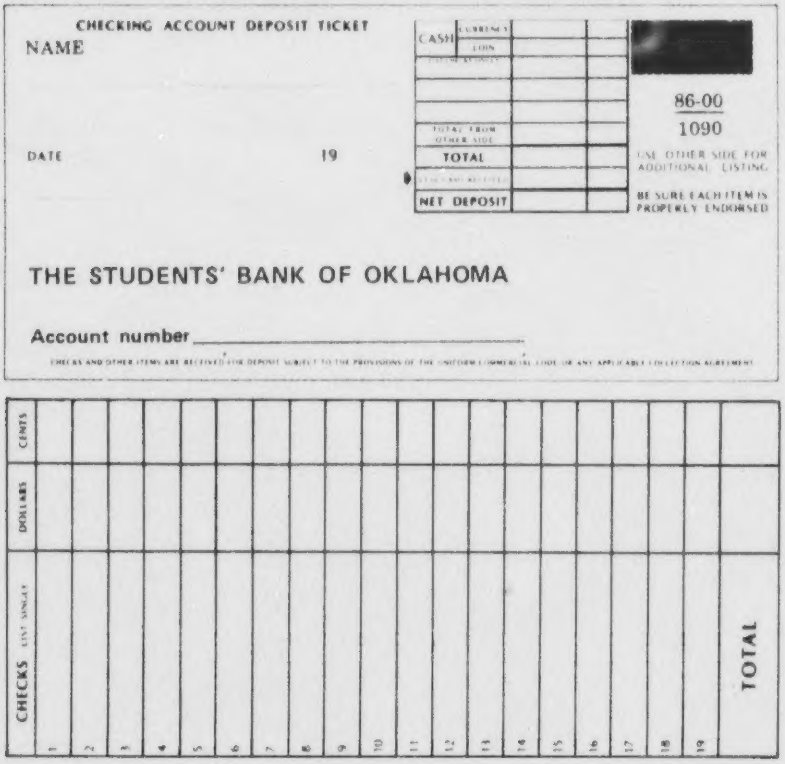
A. Endorse backs of checks on left end

(NOTE: It is best to use a restrictive endorsement that states *for deposit only* in the account of doctor's name. A stamp with needed information can be used to save time.)



INFORMATION SHEET

B. Make out deposit slip with correct date, doctor's name, account number, and itemized amount and total to be deposited



CHECKING ACCOUNT DEPOSIT TICKET

NAME

DATE 19

CASH	CURRENCY		
	COIN		
TOTAL FROM OTHER SIDE			
TOTAL			
NET DEPOSIT			

[redacted]

86-00
1090

USE OTHER SIDE FOR ADDITIONAL LISTING

BE SURE EACH ITEM IS PROPERLY ENDORSED

THE STUDENTS' BANK OF OKLAHOMA

Account number ______________________

CHECKS AND OTHER ITEMS ARE RECEIVED FOR DEPOSIT SUBJECT TO THE PROVISIONS OF THE UNIFORM COMMERCIAL CODE OR ANY APPLICABLE COLLECTION AGREEMENT

CHECKS LIST SINGLY	DOLLARS	CENTS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
TOTAL		

XIII. Items that appear on monthly expense sheet (Transparency 3, Assignment Sheets #7 and #8)

(NOTE: Items listed below are common in almost every office; other items may be included depending on doctor's preference. The monthly totals will be entered on the yearly summary sheet.)

A. Clinical supplies

B. Office supplies

C. Laboratory fees

D. Utilities

INFORMATION SHEET

E. Laundry

F. Office payment and upkeep

G. Salaries

H. Miscellaneous

XIV. Items found on record of employees' salaries and tax deductions (Assignment Sheet #9)

(NOTE: All employees should keep a record of this information, if not provided by the employer.)

A. Name of employee

B. Social Security number

C. Total exemptions

D. Date paid

E. Period paid for

F. Earnings (gross salary)

(NOTE: This is *total salary earned.*)

G. Withholding (Federal income tax withheld)

H. Social Security tax (FICA)

I. Other pay deductions

Examples: State income tax, unemployment insurance, credit union

J. Net salary

(NOTE: This is the amount the employee actually takes home after all deductions are made.)

XV. Process of depositing withheld income tax and Social Security (FICA)

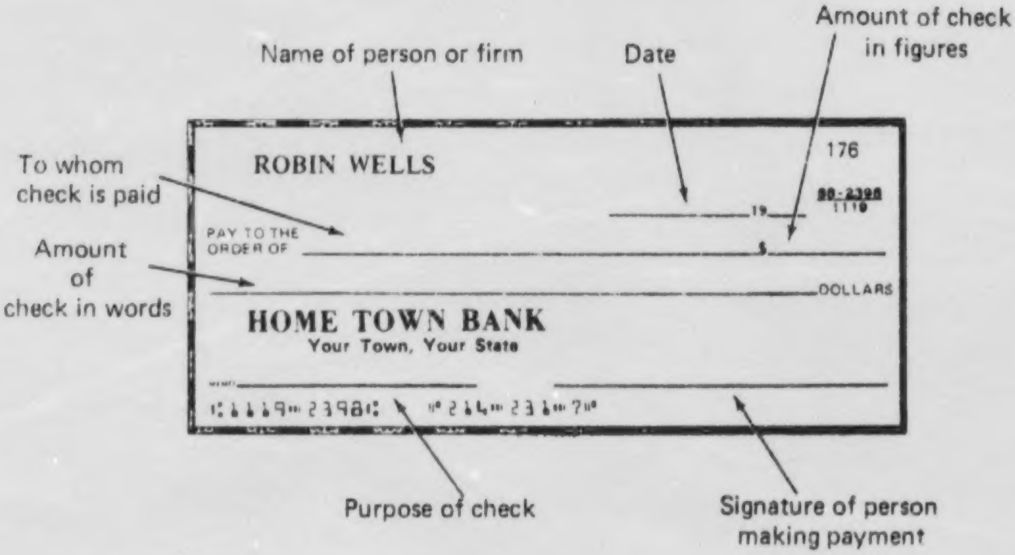
A. Employer must deposit withheld income tax and Social Security in an authorized commercial bank or a Federal reserve bank

B. Internal Revenue Service will send a Federal Tax Deposit Form 501 for reporting needed information

C. Employer must file a quarterly report on Form 941, even though monthly deposits are made

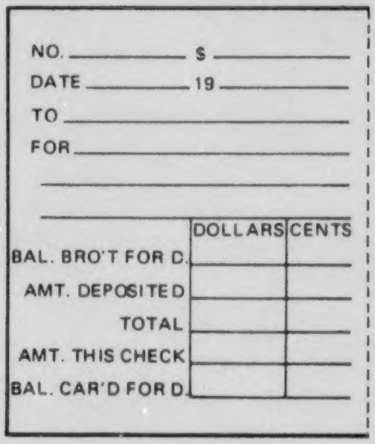
INFORMATION SHEET

XVI. Parts of a check (Assignment Sheet #10)


Name of person or firm
Date
Amount of check in figures
To whom check is paid
Amount of check in words
ROBIN WELLS
176
19
PAY TO THE ORDER OF
$
DOLLARS
HOME TOWN BANK
Your Town, Your State
Purpose of check
Signature of person making payment

INFORMATION SHEET

XVII. Items that are needed on a check stub (Assignment Sheet #10)



NO. ________ $ ________
DATE ________ 19 ________
TO ____________________
FOR ____________________
____
____

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

- A. Number of check
- B. Amount of check
- C. Date
- D. To whom check is paid
- E. Purpose of check
- F. Balance brought forward
- G. Amount deposited (if any)
- H. Total
- I. Amount of this check
- J. Balance carried forward

XVIII. Steps in reconciling bank statements (Assignment Sheet #11)

- A. Verify amount of cancelled checks with amounts on bank statement
- B. Arrange cancelled checks numerically
- C. Compare amount of cancelled checks and deposits with amounts written in checkbook stub (register)
- D. Check off (✓) all cancelled checks and deposits in the checkbook stub (register)

INFORMATION SHEET

E. List outstanding checks (those not returned to bank) with check number and amount

(NOTE: If a deposit has been made that does not show on the bank statement, amount should be added to balance.)

F. Subtract total amount of outstanding checks from statement balance

(NOTE: Other charges such as service charges, debit memo, and overdrafts, will also need to be subtracted.)

G. Make sure that adjusted bank balance and adjusted checkbook balance are equal

XIX. Handling of petty cash (Transparencies 4-7; Assignment Sheet #12)

A. Write check from office account for cash needed

(NOTE: Amount depends on office served; it is usually fifty dollars or less.)

B. Fill out a numbered voucher each time money is taken from fund

C. Balance amount of voucher and remaining cash to original amount of petty cash when fund is low or depleted

XX. Types of insurance programs

A. Private (non-profit or profit)

(NOTE: Many firms offer group and individual policies covering a variety of conditions.)

1. Commercial carriers

2. Professional organizations

Examples: Blue Cross/Blue Shield, Worker's Compensation, American Vocational Association, Champus

B. Public programs (government operated)

1. Medicare

2. Medicaid

XXI. Points to consider when filling out insurance forms

A. Know policies you see most often

B. Learn benefits that pertain to you

C. Use a standard form, when possible

INFORMATION SHEET

- D. Get insurance details during patient's first visit

  Example: Name of company; type of policy; policy number

- E. Tell patient in advance when policy is not going to pay full fee
- F. Find out who will receive money from company
- G. Use standard medical terminology
- H. Get claims in as quickly as possible
- I. Follow up unpaid claims
- J. Make rules for special situations

  (NOTE: Some doctors charge for filling out insurance claim forms and ask for a small amount as a service charge.)

- K. Use telephone to call company representative if you have questions

XXII. Basic information found on insurance claims (Assignment Sheet #13)

- A. Initial information

  Examples: Name, age, sex, employer, address, telephone number

- B. Group number or claim number
- C. Policyholder's name

  (NOTE: Policyholder is the person who enrolled in the insurance program. The patient will be a family member who is covered by the policy.)

- D. Relationship of patient to policyholder
- E. Other health insurance coverage
- F. Diagnosis/symptoms

  (NOTE: This includes details of accident, if needed.)

- G. Description of services and charges

  (NOTE: After form is completed doctor should review and sign insurance claim.)

- H. Injury or condition related to occupation

  (NOTE: If illness or injury was related to job, the time should be noted when injury or condition occurred, and when medical treatment was obtained.)

Petty Cash Fund

Pay for Small Expenses
Involved in Operating Office

- Stamps
- Delivery
- Office Supplies
- Miscellaneous funds for Cards, Flowers, and Gifts

MA - 213-C

Petty Cash Summary

Snappy Practice Office
PETTY CASH SUMMARY
July 30, 1980

Delivery Expense	$ 29.18
Miscellaneous Expense	$ 17.84
Office Expense	$ 96.09
Total Petty Cash Vouchers	$195.68
Plus Cash in Box	$ 41.69
	$184.80

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #1--COMPOSE COLLECTION LETTERS

NAME______________________________ SCORE______________

The most sensitive area in the medical office is the follow-up procedure on financial accounts that are overdue. The approach you use may determine if you keep that patient or if they are lost to another practice.

Most people are willing to pay their bills, but sometimes unexpected problems cause a temporary setback.

It is your job as a medical assistant to collect accounts. An appropriate note at the time of billing is usually most effective. If this is not successful, then you must send collection letters.

(NOTE: Some patients will ignore all requests for payment; then the accounts must be turned over to the collection agency of your doctor's choice.)

Use the information learned in this unit and the following sample collection letters to compose your own collection letters. Compose collection letters for an overdue account for 30 days (end of month), 60 days, 74 days, and 90 days. Type in block or semi-blocked form.

Turn in to your instructor or exchange for class discussion.

ASSIGNMENT SHEET #1

SAMPLE STRONG COLLECTION LETTER

BRENDA COLLINS, M.D.
406 Main Street
Smalltown, Oklahoma 12345
Phone: 765-4321

December 30, 1980

Walter Smith
139 Maple
Smalltown, Oklahoma 12345

Many customers appreciate a reminder when their account becomes overdue.

Your current balance is $________________________________.

We hope to hear from you soon.

Sincerely,

Brenda Collins, M.D.

Brenda Collins, M.D.

ASSIGNMENT SHEET #1

SAMPLE STRONGER COLLECTION LETTER

BRENDA COLLINS, M.D.
406 Main Street
Smalltown, Oklahoma 12345
Phone: 765-4321

January 28, 1980

Walter Smith
139 Maple
Smalltown, Oklahoma 12345

Dear Mr. Smith:

Your account balance of $_________ is long past due.

We hope this is merely on oversight on your part and that we will receive payment soon. If you need more time to pay your bill, please contact our office to make other arrangements. We will be happy to help you find a reasonable way to settle this situation.

Cordially,

Brenda Collins, M.D.

Brenda Collins, M.D.

218-C

ASSIGNMENT SHEET #1

SAMPLE VERY FIRM COLLECTION LETTER

BRENDA COLLINS, M.D.
406 Main Street
Smalltown, Oklahoma 12345
Phone: 765-4321

February 11, 1980

Walter Smith
139 Maple
Smalltown, OK 12345

Dear Mr. Smith:

Your payment is now seriously overdue. Though we have sent you several invoices and two letters, your check has not been received. Neither have we had any explanation for your nonpayment.

Frankly, we dislike the thought of having to turn your account over to a collection agency. But unless we receive payment within ten days, we will be forced to take this drastic step. Wouldn't it be easier to settle your account?

Please write a check now, attach it to the enclosed invoice and mail it to us AT ONCE in the enclosed self-addressed envelope so that the matter may be cleared up.

Very truly yours,

Brenda Collins, M.D.

Brenda Collins, M.D.

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #2--COMPLETE CHARGE SLIP, DAILY LOG JOURNAL, LEDGER SHEET, AND RECEIPT

NAME_______________________________________ SCORE________________

The medical assistant has the major responsibility for completing the charge slips, daily log, ledger sheet, and receipts correctly.

Use the information given below to complete the charge slips, daily log journal, ledger sheets, and receipts that follow.

May 25, 19-- 9:00 a.m.

Cathy Winston came into the office for a chest X-ray and throat culture. She paid $45 on her account with a check.

Office call--$15.00
Lab. --$10.00
X-ray --$20.00

May 25, 19-- 10:00 a.m.

Candy Osborne came into the office with a skin rash. She paid her bill with $25 cash.

Office call--$15.00
Inj. --$10.00

May 25, 19-- 10:45 a.m.

James Reid came into the office for a follow up and a fasting blood sugar. He paid $15.00 in cash.

O.C. Follow-up--$10.00
Lab. --$15.00

ASSIGNMENT SHEET #2

CHARGE SLIPS

Kim R. Truitt, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE ____________

PATIENT ________________

OFFICE CALL. . . . ________

LABORATORY. . . ________

X-RAY. . . . . ________

INJECTION. . . . . . ________

OTHER. . . . . ________

____________ ________

____________ ________

TOTAL . . . ________

NEXT APPT. ____________

Please leave this slip
with receptionist.

Kim R. Truitt, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE ____________

PATIENT ________________

OFFICE CALL. . . . ________

LABORATORY. . . ________

X-RAY. . . . . ________

INJECTION. . . . . . ________

OTHER. . . . . ________

____________ ________

____________ ________

TOTAL. . . . ________

NEXT APPT. ____________

Please leave this slip
with receptionist.

Kim R. Truitt, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE ____________

PATIENT ________________

OFFICE CALL. . . ________

LABORATORY. . ________

X-RAY. . . . . ________

INJECTION. . . . . ________

OTHER. . . . . ________

____________ ________

____________ ________

TOTAL. . . . .________

NEXT APPT. ____________

Please leave this slip
with receptionist.

ASSIGNMENT SHEET #2

DAILY LOG JOURNAL PAGE

		NAME	SERVICE RENDERED	√	CHARGE		PAID	
8	00							
	15							
	30							
	45							
9	00							
	15							
	30							
	45							
10	00							
	15							
	30							
	45							
11	00							
	15							
	30							
	45							
12	00							
	15							
	30							
	45							
1	00							
	15							
	30							
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2	00							
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4	00							
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	30							
	45							
5	00							
	15							
	30							
	45							
6	00							
	15							
	30							
	45							
7	00							
	15							
	30							
	45							
8	00							
	15							
	45		TOTALS					

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MA - 225-C

ASSIGNMENT SHEET #2

LEDGER SHEET

STATEMENT

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

Telephone 372-7182

Cathy Winston
221 Lovelane
Newlywed, America 00000

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE		PAID		NEW BALANCE	
	12/3	O.C.	15	00				
		Lab	25	00			40	00
	2/13	O.C. - follow-up	10	00			50	00
1029	3/24	by check, pd. on acct.			25	00	25	00

1631

PAY LAST AMOUNT IN THIS COLUMN ⇧

OC	OFFICE CALL	EKG	ELECTROCARDIOGRAM	NC	NO CHARGE
HV	HOSPITAL VISIT	CP	COMPLETE PHYSICAL	EC	ERROR CORRECTION
LAB	LABORATORY	S	SURGERY		
INJ	INJECTION	X	X-RAY		

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ASSIGNMENT SHEET #2

LEDGER SHEET

STATEMENT

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

Telephone 372-7182

Candy Osborne
3624 34th Street
City, State 00000

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE		PAID		NEW BALANCE	
	1/15	O.C.	15	00				
		X-ray	35	00				
		Lab.	21	00			71	00
	3/4	O.C. Follow-up	10	00			81	00
1154		by check, pd. on acct.			81	00	—	

1631

PAY LAST AMOUNT IN THIS COLUMN ⇧

OC - OFFICE CALL
HV - HOSPITAL VISIT
LAB - LABORATORY
INJ - INJECTION

EKG - ELECTROCARDIOGRAM
CP - COMPLETE PHYSICAL
S - SURGERY
X - X-RAY

NC - NO CHARGE
EC - ERROR CORRECTION

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ASSIGNMENT SHEET #2

RECEIPTS

Telephone 372-7182 1216

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE________________

RECEIVED OF____________________________ $__________
Check
Currency__________________________________ DOLLARS

On Account of__________________________________

Account Total $________________

Amount Paid $________________ Per________________

Balance Due $________________

Kindly retain this receipt for tax purposes.

Telephone 372-7182 1217

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE________________

RECEIVED OF____________________________ $__________
Check
Currency__________________________________ DOLLARS

On Account of__________________________________

Account Total $________________

Amount Paid $________________ Per________________

Balance Due $________________

Kindly retain this receipt for tax purposes.

ASSIGNMENT SHEET #2

RECEIPT

Telephone 372-7182 1218

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE ____________________

RECEIVED OF ____ $ ____________

Check
Currency ____ DOLLARS

On Account of ____

Account Total $ ____________________

Amount Paid $ ____________________ Per ____________________

Balance Due $ ____________________

Kindly retain this receipt for tax purposes.

BUSINESS PROCEDURES
UNIT V

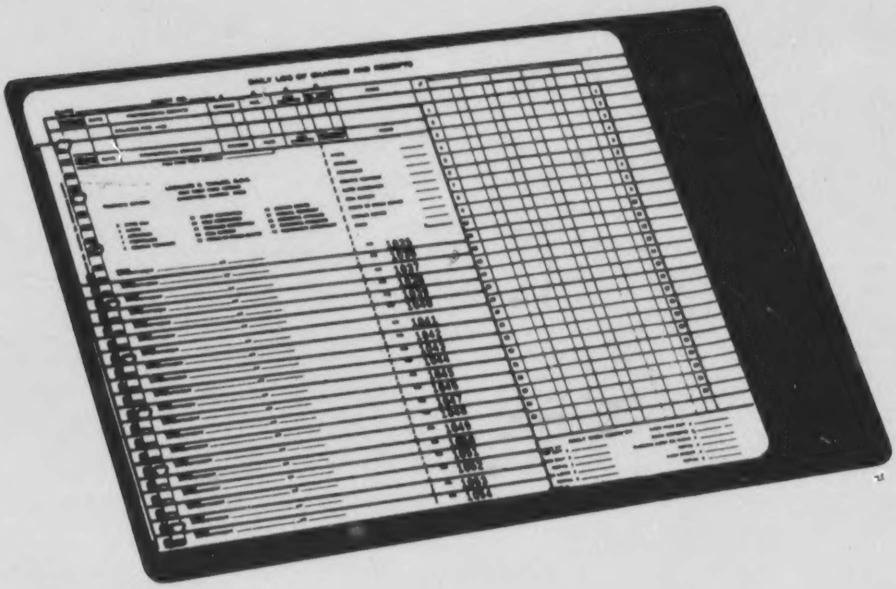
ASSIGNMENT SHEET #3--PRACTICE PEGBOARD SYSTEM

NAME____ SCORE__________________

When using the pegboard system, entries should be made with ballpoint pen; press hard so all information will transfer. The pegboard system is basically the same as other systems except you only write it once.

Place a new daily journal page on pegboard each morning. Write in the date, number, and totals brought forward from previous page.

(NOTE: More than one page may be used per day but do not put more than one journal page on the pegboard at one time, as it makes the base too soft for carbons to come through.)



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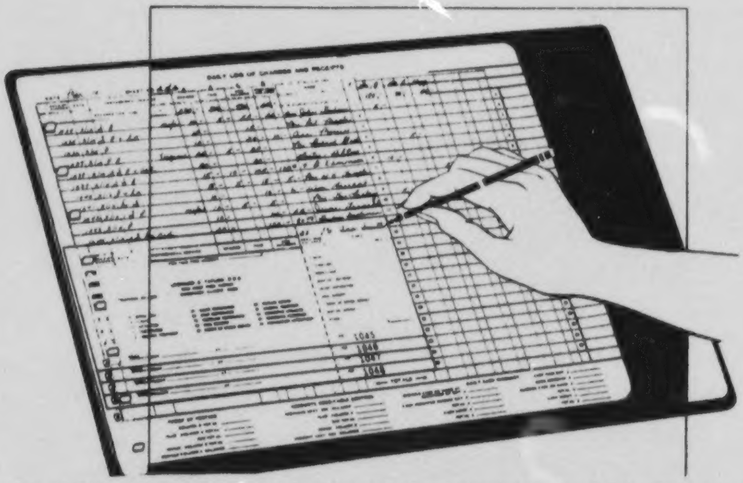
Place a series of receipts and charge slips in pegged position over journal page. Align first slip with first blank line.

ASSIGNMENT SHEET #3

Complete charge slip portion and charge form when patient arrives.

(NOTE: This shows name of patient and previous balance. In doing this you have registered the person's name on the daily journal record; this insures that there will be no lost or forgotten charges.)


DAILY LOG OF CHARGES AND RECEIPTS
1045
1046
1047
1048

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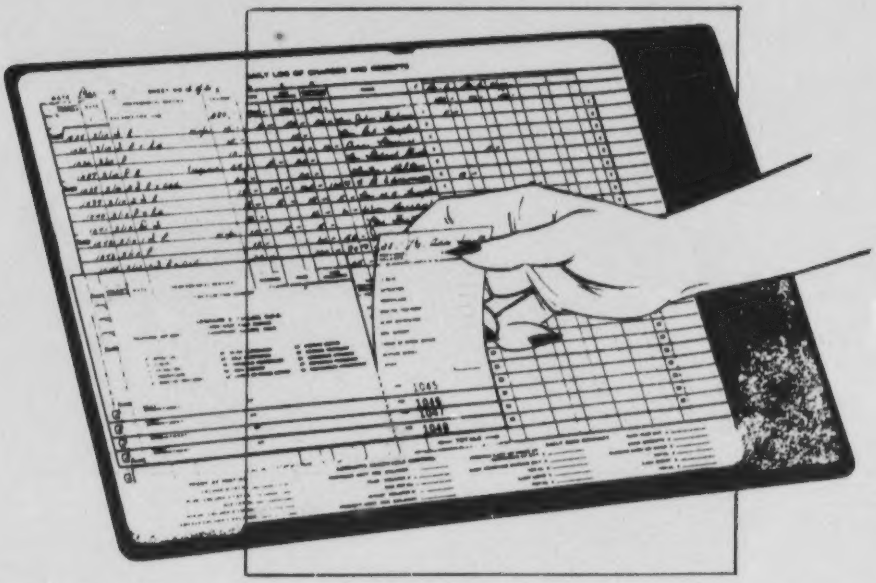
Tear off charge portion and attach to patient's chart, then forward to doctor.


DAILY LOG OF CHARGES AND RECEIPTS
1045
1046
1047
1048

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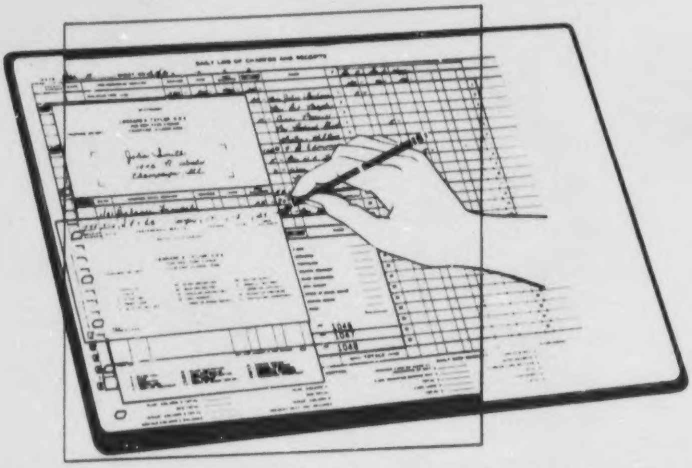
ASSIGNMENT SHEET #3

Place ledger card in proper alighment with first blank line under the correct prenumbered receipt form when the patient or assistant returns it to the business office

Record the following entries starting from the left side: Receipt number, date, name of patient, services rendered, fees charged, payment made, and new balance, if any.



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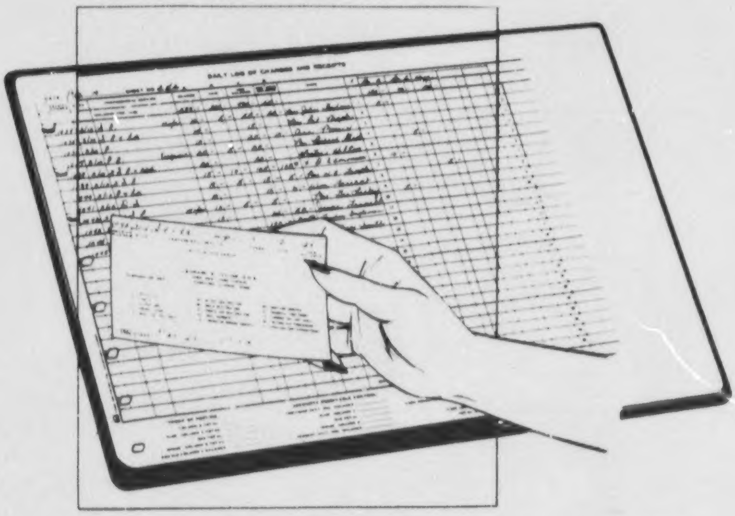
Remove receipt portion from pegboard and give to patient.



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MA - 239-C

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #4–BALANCE DAILY LOG IN PEGBOARD SYSTEM

NAME________________________________ SCORE______________

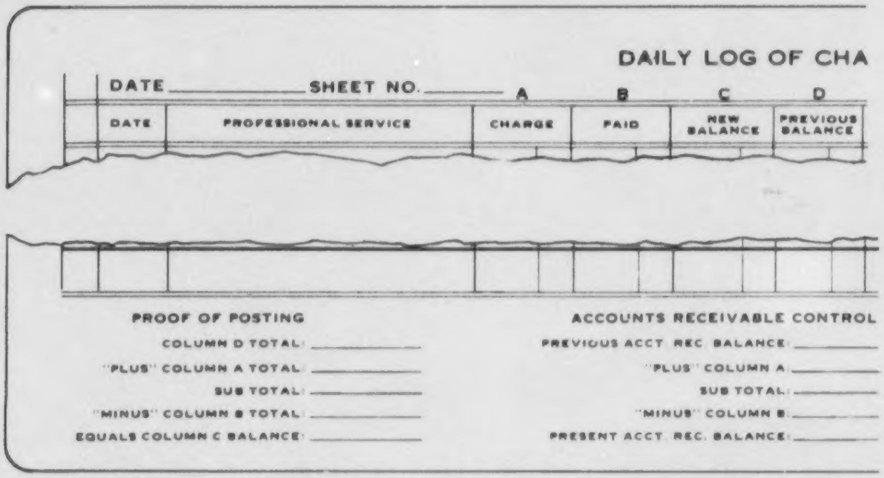
At the end of the day all columns of the daily journal pages are totaled.

IF there is an error, it is necessary to go back and locate it. One place to look for errors is in the calculation of the new balances of accounts. This is done by adding the old balance (column D), to the charges (column A) and subtracting any payments (column B). This should equal the new balance shown in column C. If an error has been made, it must be corrected both on the daily journal page and on the patient's ledger card.

Provision for another routine is found at the bottom of the daily journal page. It is called "Accounts Receivable Control." The key word is "control." The total amount owed the practice by all patients is known as "accounts receivable." It changes every day, increased by the fees charged, decreased by payments received. For this calculation the previous accounts receivable balance is brought forward. The total of column A is added to it. The column B total is subtracted from the resulting subtotal and thus yields the new balance of all accounts receivable. If the total continues to grow, there may be collection problems in the office.

Use the figures provided to balance the daily log below.

Column D total - $585.00
Column A total - $345.00
Column B total - $240.00



DAILY LOG OF CHA

DATE__________ SHEET NO.________

		A	B	C	D
DATE	PROFESSIONAL SERVICE	CHARGE	PAID	NEW BALANCE	PREVIOUS BALANCE

PROOF OF POSTING

COLUMN D TOTAL: __________
"PLUS" COLUMN A TOTAL: __________
SUB TOTAL: __________
"MINUS" COLUMN B TOTAL: __________
EQUALS COLUMN C BALANCE: __________

ACCOUNTS RECEIVABLE CONTROL

PREVIOUS ACCT. REC. BALANCE: __________
"PLUS" COLUMN A: __________
SUB TOTAL: __________
"MINUS" COLUMN B: __________
PRESENT ACCT. REC. BALANCE: __________

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BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #5--FIGURE COURTESY DISCOUNTS

NAME____ SCORE__________________

The health field is made up of a unique group of people who work as a team to give total care to humanity. As a general rule, when health professionals give care and treatment to their peers it is customary to give a courtesy discount. This is usually in the form of a certain percentage of the usual fee subtracted from the total.

In figuring a patient's discount, drop the percent sign (%) and move the decimal point two places to the left. Multiply by that number to get the amount of discount.

Example: 10% of $368.60

$$\begin{array}{r} \$368.60 \\ \times \quad .10 \\ \hline 36.8600 \end{array} \qquad \begin{array}{r} \$368.60 \\ -\ 36.80 \\ \hline \$331.80 \end{array}$$

Figure discounts for the following. Show your work.

1. Bill for $520.00; doctor gave 20% professional discount.

TOTAL = $________________________________

2. Bill for $600.00; doctor gave 12% professional discount.

TOTAL = $________________________________

3. Bill for $1,000.00; doctor gave 15% professional discount.

TOTAL = $________________________________

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #6--PREPARE A BANK DEPOSIT

NAME ______________________________ SCORE ______________

As a business office assistant you will be asked to deposit the money in the bank each day. Always be sure your bank deposit slips are completely and accurately made out.

The information needed to properly fill out the deposit slip includes name of depositor, account number, date and items to be deposited.

(NOTE: List checks by patients' names, to be used later as a double check in case of a mistake in the transfer of figures or money.)

Arrange bills in different denominations. You should separate each denomination, such as $20, $10, $5, and $1. Be sure all bills face the same way, with the front side up, and the large bills on top.

(NOTE: This makes money easier to count and the bank teller happy.)

List checks separately on the deposit slip, with the largest on top. Add all currency and write amount in currency blank, then total of all checks. Add the amount of your checks and currency and write amount where it says *Total*.

Prepare deposit slips for the amounts below, using the forms on the following pages.

Deposit #1

Prepare a deposit for Margaret Reynolds, M.D., 80 Next Door St., Fun City, America 12345. Account #36-444-1.

CHECKS		CURRENCY	
Brown, Bill ck.	$ 50.00	five	$20.00 bills
Jones, Joe ck.	$100.00	eight	$10.00 bills
Bardesis, Sara ck.	$ 14.00	three	$ 5.00 bills
Mayfield, Wanda ck.	$ 35.00	two	$ 1.00 bills

Deposit #2

Prepare a deposit slip for Kim R. Truitt, M.D., 600 N. Elm, Anycity, Oklahoma 65432. The account number is 77-150-1

CHECKS		CURRENCY	
Raines, Janet ck.	$25.00	one	$20.00 bills
Murnane, Lynne ck.	$55.00	three	$10.00 bills
Hefner, Jack D. ck.	$ 4.78	six	$ 1.00 bills
Hefner, Jackie B. ck.	$67.52		

ASSIGNMENT SHEET #6

Deposit #1

CHECKING ACCOUNT DEPOSIT TICKET

NAME ______________________

____

DATE ______________ 19 ____

____

CASH	CURRENCY		
	COIN		
LIST CHECKS SINGLY			
TOTAL FROM OTHER SIDE			
TOTAL			
LESS CASH RECEIVED			
NET DEPOSIT			

[redacted]

86-00
1090

USE OTHER SIDE FOR ADDITIONAL LISTING

BE SURE EACH ITEM IS PROPERLY ENDORSED

THE STUDENTS' BANK OF OKLAHOMA

______________________ Account Number

CHECKS AND OTHER ITEMS ARE RECEIVED FOR DEPOSIT SUBJECT TO THE PROVISIONS OF THE UNIFORM COMMERCIAL CODE OR ANY APPLICABLE COLLECTION AGREEMENT

CHECKS LIST SINGLY	DOLLARS	CENTS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
TOTAL		

ENTER TOTAL ON THE FRONT OF THIS TICKET

MA - 247-C

ASSIGNMENT SHEET #6

Deposit #2

CHECKING ACCOUNT DEPOSIT TICKET

NAME ______________________

____

DATE ______________ 19 ____

____

CASH	CURRENCY		
	COIN		
LIST CHECKS SINGLY			
TOTAL FROM OTHER SIDE			
TOTAL			
LESS CASH RECEIVED			
NET DEPOSIT			

[redacted]

86-00
1090

USE OTHER SIDE FOR ADDITIONAL LISTING

BE SURE EACH ITEM IS PROPERLY ENDORSED

THE STUDENTS' BANK OF OKLAHOMA

______________________ **Account Number**

CHECKS AND OTHER ITEMS ARE RECEIVED FOR DEPOSIT SUBJECT TO THE PROVISIONS OF THE UNIFORM COMMERCIAL CODE OR ANY APPLICABLE COLLECTION AGREEMENT

CHECKS LIST SINGLY	DOLLARS	CENTS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
TOTAL		

ENTER TOTAL ON THE FRONT OF THIS TICKET

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #7--PREPARE MONTHLY EXPENSE SHEET

NAME____________________________________ SCORE________________

A monthly expense sheet is maintained for the doctor to determine the cost of conducting his or her business and for income tax purposes. It is your job to prepare an accurate monthly expense sheet.

Use your judgment to determine where to enter the following expenditures. Use the expense sheet provided on the page that follows.

Expenses for the month of January include:

Date	Check #	Written to	For	Amount
1/2	001	Clinitex Supply Co.	Clinical supplies	$144.15
1/2	002	Realty Investment Co.	Rent	$800.00
1/2	003	Ding-A-Ling Telephone Co.	Telephone	$150.00
1/2	004	Mark Simpson	Assistant's Salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/2	005	City of Fun City	Office taxes	$ 9.06
1/3	006	Peter Hook	Repairs of office	$ 30.00
1/4	007	Provincial Ins. Co.	Liability insurance	$ 24.60
1/4	008	Public Service Electric & Gas Co.	Utilities (Office)	$ 65.00
1/7	009	National Medical Supply Co.	Supplies/clinical	$ 18.75
1/7	010	Mark Simpson	Assistant's Salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/8	011	Trades Hotel	Medical meeting	$200.00
1/8	012	Pure Cleaning Services	Cleaning office	$ 75.00
1/9	013	Cable Company	Supplies/office	$ 18.50
1/12	014	S.S. White Dental Manufacturing Co.	Supplies/clinical	$ 85.00
1/13	015	American Medical Association	Dues	$125.00

250-C

ASSIGNMENT SHEET #7

Date	Check #	Written to	For	Amount
1/13	016	Assoc. for the Blind	Donation	$ 25.00
1/13	017	Coffee Bean Company	Office supplies	$100.00
1/14	018	Mark Simpson	Assistant's Salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/15	019	Sterile Drape Supply	Clinical drapes	$ 25.00
1/15	020	Keystone Printing Co.	Office stationery	$ 35.75
1/17	021	Hotel Traymore	Convention expenses	$250.00
1/19	022	Cash	Personal	$ 75.00
1/18	023	Mark Simpson	Assistant's Salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/22	024	Reale Towel Supply Co.	Laundry	$ 15.45
1/24	025	*Reader's Digest*	Office magazine	$ 4.63
1/24	026	*Medical Digest*	Professional magazine	$ 35.00
1/27	027	Warren Laboratory	Laboratory fees	$175.00
1/29	028	Easy Repair Co.	Typewriter repair	$ 75.00

MA - 251-C

ASSIGNMENT SHEET #7

MONTHLY EXPENSE SHEET

MONTH____________________ **19**______

DATE	PAID TO	CHECK NO.	FOR	AMOUNT PAID	CLINICAL SUPPLIES	LABORATORY	OFFICE SUPPLIES	UTILITIES	SALARIES	LAUNDRY	OFFICE PAYMENT UPKEEP	PERSONAL EXPENSES								
			TOTALS																	

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #8--PREPARE YEARLY SUMMARY SHEET

NAME______________________________ SCORE________________

The yearly summary sheet contains the total of each month's expenditures in each area paid. The totals are used at the end of the year to determine the amount paid out and the amount taken in.

Use totals entered in the January monthly expense sheet completed in Assignment Sheet #7 plus the totals given on the next page to complete the yearly summary sheet on the page that follows. Add each column for yearly totals after entering each month's figures.

ASSIGNMENT SHEET #8

Month	Clinical Supplies	Laboratory	Office Supplies	Office Pay-Ment/Upkeep	Utilities	Laundry	Salaries	Misc.
FEBRUARY	$620.00	$223.00	$430.00	$1,200.00	$225.00	$150.00	$525.00	$150.00
MARCH	444.00	200.00	180.00	990.00	236.00	75.00	525.00	400.00
APRIL	750.00	150.00	200.00	890.00	180.00	160.00	525.00	350.00
MAY	800.00	390.00	525.00	1,600.00	90.00	86.00	525.00	300.00
JUNE	500.00	290.00	300.00	1,700.00	96.00	200.00	565.00	250.75
JULY	320.00	330.00	150.00	950.00	125.85	400.00	525.00	340.00
AUGUST	85.00	223.00	730.00	1,300.00	240.00	57.00	525.00	60.00
SEPTEMBER	72.00	140.00	54.00	1,290.00	140.00	85.00	525.00	95.00
OCTOBER	920.00	340.75	75.00	1,329.00	65.00	64.00	525.00	45.00
NOVEMBER	500.00	140.00	45.00	1,400.00	100.00	50.00	525.00	89.00
DECEMBER	150.00	235.00	25.00	1,300.00	85.00	90.00	750.00	50.00

ASSIGNMENT SHEET #8

YEARLY SUMMARY SHEET

19_____	Clinical Supplies	Laboratory	Office Supplies	Office Pay-Ment/Upkeep	Utilities	Laundry	Salaries	Misc.
JANUARY								
FEBRUARY								
MARCH								
APRIL								
MAY								
JUNE								
JULY								
AUGUST								
SEPTEMBER								
OCTOBER								
NOVEMBER								
DECEMBER								
TOTALS								

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #9--PREPARE RECORD OF EMPLOYEES' SALARIES AND TAX DEDUCTIONS

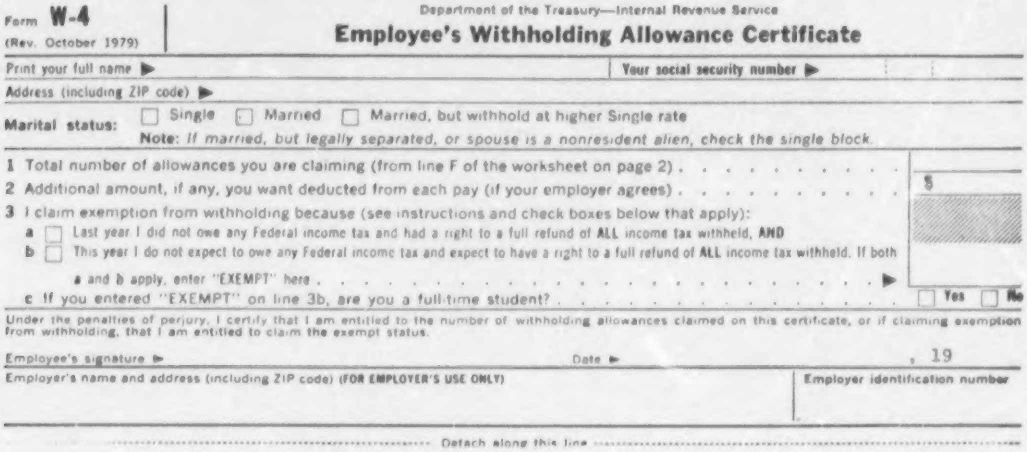
NAME_______________________________ SCORE_______________

PART I

One of the forms a medical assistant must fill out upon getting a job is Employee's Withholding Allowance Certificate, Form W-4. The number of exemptions that you claim on this form will be used in computing your withholding tax.

(NOTE: You must have your Social Security number before going to work.)

Complete the W-4 form below using your full name, your Social Security number, home address, city, state, and zip code. Choose the exemptions that fit you, total exemptions at bottom, then sign your name and date the form.



Form **W-4**
(Rev. October 1979)

Department of the Treasury—Internal Revenue Service

Employee's Withholding Allowance Certificate

Print your full name ▶ | **Your social security number ▶**

Address (including ZIP code) ▶

Marital status: ☐ Single ☐ Married ☐ Married, but withhold at higher Single rate

Note: *If married, but legally separated, or spouse is a nonresident alien, check the single block.*

1 Total number of allowances you are claiming (from line F of the worksheet on page 2) . . . .

2 Additional amount, if any, you want deducted from each pay (if your employer agrees) . . . . $

3 I claim exemption from withholding because (see instructions and check boxes below that apply):

- a ☐ Last year I did not owe any Federal income tax and had a right to a full refund of **ALL** income tax withheld, **AND**
- b ☐ This year I do not expect to owe any Federal income tax and expect to have a right to a full refund of **ALL** income tax withheld. If both a and b apply, enter "EXEMPT" here . . . . ▶
- c If you entered "EXEMPT" on line 3b, are you a full-time student? . . . . ☐ Yes ☐ No

Under the penalties of perjury, I certify that I am entitled to the number of withholding allowances claimed on this certificate, or if claiming exemption from withholding, that I am entitled to claim the exempt status.

Employee's signature ▶ Date ▶ , 19

Employer's name and address (including ZIP code) (FOR EMPLOYER'S USE ONLY) | **Employer identification number**

Detach along this line

ASSIGNMENT SHEET #9

PART II

The tax rate is determined by Congress according to the Federal Insurance Contribution Act (FICA). It is very important that you learn to figure Social Security (FICA) tax, since every employer is required to deduct (FICA) taxes from salaries paid to employees. As a business assistant, you will have to figure Social Security taxes for other employees.

At this time the tax rate is to be paid by each employee. This tax rate may go up or down, so check with your instructor for current amounts.

Example for figuring taxes on salaries:

If the FICA withholding table, for employee's share of tax only, is extended to only $100 of wages, to compute the FICA withholding for wages over $100, either multiply the total wage by the current established rate or use the multiples of the tax on $100 wages. The multiples are listed at the end of the table.

Examples: Wage paid subject to FICA is $437.82. The amount of FICA tax to be withheld is:

on $400.00	$24.52
on 37.82	2.32
total	$26.84

Wage paid subject to FICA is $1,289.62. The amount of FICA tax to be withheld is:

on $1,000.00	$61.30
on 200.00	12.26
on 89.62	5.49
total	$79.05

Practice figuring the taxes on following salaries by using the amounts given and tables provided for you by your instructor.

Mary Brown earns $225.00 a week. How much Social Security tax should be deducted each week?

$________________________________

David Jones earns $200.00 a week. How much Social Security tax should be deducted each week?

$________________________________

Janet Green earns $750.00 a month. How much Social Security tax should be deducted?

$________________________________

ASSIGNMENT SHEET #9

PART III

A yearly earnings record must be filled out for each employee. It shows total earnings, deductions, and net salary. For a class, you will only complete a record for six months (2 quarters).

At the top of the form on the next page you will find space for employee name, Social Security number, and number of exemptions. Your sample employee will be Mary Brown from Part II, whose salary is $225.00 per week. She is single, claims one exemption, and is paid weekly. She also received a raise, after the first quarter, of $10.00 per week.

Fill out the Earnings Record using the Social Security tables and the withholding tables provided by your instructor.

Be sure to fill in:

1. Date paid (date of employee's check)
2. Period paid for (weekly, monthly)
3. Earnings (gross salary)
4. Income tax (withholding tax)
5. Social Security tax (FICA)
6. Net salary (salary after deductions)

(NOTE: Other deductions include state income tax, hospitalization insurance.)

MA - 261-C

ASSIGNMENT SHEET #9

EARNINGS RECORD – SOCIAL SECURITY – WITHHOLDING

NAME SOCIAL SEC. NO. EXEMPTIONS

DATE PAID	PERIOD PAID FOR	EARNINGS		WITHHOLDING		FICA		OTHER PAY DEDUCTIONS				NET SALARY	
TOTAL JAN.													
TOTAL FEB.													
TOTAL MAR.													
TOTAL 1st QTR.													
TOTAL APRIL													
TOTAL MAY													
TOTAL JUNE													
TOTAL 2nd QTR.													
TOTAL HALF YEAR													

MA - 263-C

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #10--WRITE A CHECK AND COMPLETE CHECK STUB

NAME ______________________________ SCORE ______________

Another duty of the medical assistant is writing checks to pay bills. You should develop a good, accurate, routine method of writing checks.

Checks are always written in ink or typed, to prevent anyone from erasing or changing the amount written.

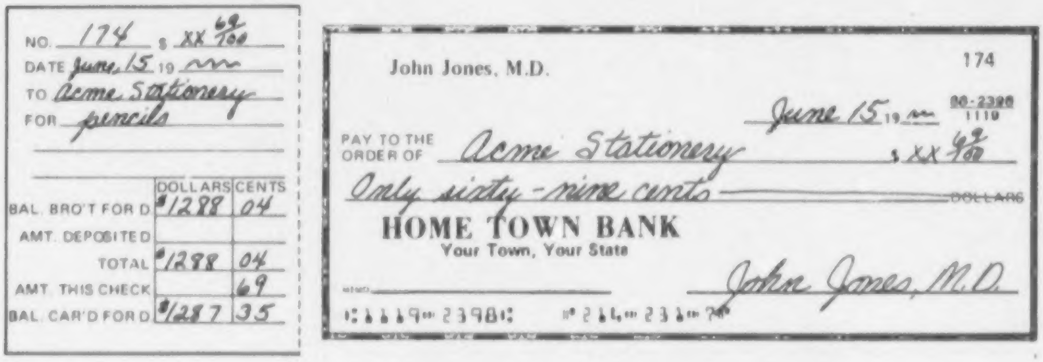
The date of the check must be the exact date it is written. Do not postdate a check. Do not erase. If an error is made, write "Void" on the check and stub, and start a new one.

Write the amount in large figures next to the printed dollar sign, close enough to prevent the insertion of other figures. In spelling out the amount, start at the extreme left, capitalize the first letter only, record cents as a fraction of a one-hundred.

Examples:	$225 00/100 Two hundred twenty-five dollars and no/100	$1,225 75/100 One thousand two hundred twenty-five dollars and 75/100

If you write a check for less than a dollar, precede the spelled-out amount with the word "only" and cross out the printed word "dollars."

Example:



NO. 174 $ XX 69/100
DATE June 15 19
TO Acme Stationery
FOR pencils

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$1288	04
AMT. DEPOSITED		
TOTAL	$1288	04
AMT. THIS CHECK		69
BAL. CAR'D FOR'D	$1287	35

John Jones, M.D.

174

June 15 19 00-2398/1119

PAY TO THE ORDER OF Acme Stationery $ XX 69/100

Only sixty-nine cents ~~DOLLARS~~

HOME TOWN BANK
Your Town, Your State

MEMO

John Jones, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7

ASSIGNMENT SHEET #10

On the blank checks and stubs provided on the following pages, write checks for amounts and people designated below. The checks will be signed by James Taylor, M.D., and the balance forward is $5,043.38. Number the checks and stubs beginning with the first of July. Write the stub amount first, then the check.

(NOTE: There will be a deposit to add.)

Balance - July 1, 1980

(NOTE: This will be just a few of the monthly expenses in an office.)

Check #	Date	Written to	Amount
001	7/1/80	Ding-a-Ling Telephone Company	$ 30.80
002	7/2/80	Anycity Gas Company	$ 23.01
003	7/3/80	Anycity Power and Light	$ 43.80
004	7/4/80	Anycity Water Supply	$ 12.82
005	7/5/80	Sparkling Cleaning Service	$ 40.00
006	7/6/80	National Supply Company	$180.00
	7/6/80	Deposit	$550.00
007	7/7/80	Quickie Printing Company (office stationery)	$ 37.75
008	7/8/80	So-Dry Towel Supply Company	$ 35.00

ASSIGNMENT SHEET #10

NO. $

DATE 19

TO

FOR

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D.

001

19

88-2398
1119

PAY TO THE
ORDER OF $

DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. $

DATE 19

TO

FOR

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D.

002

19

88-2398
1119

PAY TO THE
ORDER OF $

DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

ASSIGNMENT SHEET #10

NO. ____________ $ ____________
DATE ____________ 19 ____________
TO ____________
FOR ____________
____
____

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D.

003

____________ 19 ____

88-2398
1119

PAY TO THE
ORDER OF ____________ $ ____________

____________ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO ____________ ____________

⑆1119⑉2398⑆ ⑈214⑉231⑉7⑈

NO. ____________ $ ____________
DATE ____________ 19 ____________
TO ____________
FOR ____________
____
____

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D.

004

____________ 19 ____

88-2398
1119

PAY TO THE
ORDER OF ____________ $ ____________

____________ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO ____________ ____________

⑆1119⑉2398⑆ ⑈214⑉231⑉7⑈

MA-267-C

ASSIGNMENT SHEET #10

NO. ____________ $ ____________
DATE ____________ 19 ____________
TO ____________
FOR ____________

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D.

005

____________ 19 ____ $\frac{88\text{-}2398}{1119}$

PAY TO THE
ORDER OF ____________ $ ____________

____________ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO ____________

⑆1119⑉2398⑆ ⑈214⑉231⑉7⑈

NO. ____________ $ ____________
DATE ____________ 19 ____________
TO ____________
FOR ____________

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D.

006

____________ 19 ____ $\frac{88\text{-}2398}{1119}$

PAY TO THE
ORDER OF ____________ $ ____________

____________ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO ____________

⑆1119⑉2398⑆ ⑈214⑉231⑉7⑈

ASSIGNMENT SHEET #10

NO. ________ $ ________
DATE ________ 19 ________
TO ________
FOR ________
____
____

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D. 007

________ 19____ 88-2398/1119

PAY TO THE
ORDER OF ________ $________

________ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO ________ ________

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. ________ $ ________
DATE ________ 19 ________
TO ________
FOR ________
____
____

	DOLLARS	CENTS
BAL. BRO'T FOR D.		
AMT. DEPOSITED		
TOTAL		
AMT. THIS CHECK		
BAL. CAR'D FOR D.		

JAMES TAYLOR, M.D. 008

________ 19____ 88-2398/1119

PAY TO THE
ORDER OF ________ $________

________ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

MEMO ________ ________

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #11–RECONCILE BANK STATEMENT

NAME ______________________________ SCORE ______________

In order to maintain an accurate record of the office's checking account, the bank statement should be reconciled as soon as the records are received from the bank. Use the checks listed below and the bank statement provided to fill out the bank reconciliation form. In the office you will have the real checks to use. A checkbook register is provided for you to record the checks written, and to use in reconciling the bank statement. After all the correct adjustments have been made, these amounts should agree.

Balance, January 1, 1980: $2,043.38

Date	Check #	Written to	For	Amount
1/2	001	Clinitex Supply Co.	Clinical supplies	$144.15
1/2	002	Realty Investment Co.	Rent	$200.00
1/2	003	Ding-A-Ling Telephone Co.	Telephone	$ 6.08
1/2	004	Mark Simpson	Assistant's salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/2	005	City of Fun City	Office taxes	$ 9.06
1/3	006	Peter Hook	Repairs to office	$ 30.00
1/4	007	Provencial Ins. Co.	Liability insurance	$ 24.60
1/4	008	Public Service Electric & Gas Co.	Utilities	$ 14.01
1/7	009	National Medical Supply Co.	Supplies/clinical	$ 18.75
1/7	010	Mark Simpson	Assistant's salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/8	011	Cash	Personal	$100.00
1/8	012	Pure Cleaning Services	Cleaning office	$ 30.00
1/9	013	Cable Company	Supplies/office	$ 18.50
1/12	014	S.S. White Medical Manufacturing Co.	Supplies/clinical	$ 26.25
1/12		Deposit		$350.00

ASSIGNMENT SHEET #11

Date	Check #	Written to	For	Amount
1/13	015	American Medical Assoc.	Dues	$125.00
1/13	016	Assoc. for the Blind	Donation	$ 25.00
1/13	017	Cash	Personal	$100.00
1/14	018	Mark Simpson	Assistant's salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/15	019	Cash	Petty cash	$ 25.00
1/15	020	Keystone Printing Co.	Office stationery	$ 35.75
1/17	021	Hotel Traymore	Convention expenses	$ 65.35
1/19	022	Cash	Personal	$ 75.00
1/19		Deposit		$300.00
1/19	023	Mark Simpson	Assistant's Salary $75.00, S.S. $3.60, W.H. $12.70	$ 58.70
1/21	024	Reale Towel Supply Co.	Laundry	$ 15.45
1/22	025	*Reader's Digest*	Office magazine	$ 4.63
1/24	026	*Medical Digest*	Professional magazine	$ 6.00
1/27	027	Warren Laboratory	Laboratory fees	$175.00
1/27		Deposit		$425.00
1/29	028	Cash	Personal	$ 75.00

ASSIGNMENT SHEET #11

RECORD ALL CHARGES OR CREDITS THAT AFFECT YOUR ACCOUNT

NUMBER	DATE	DESCRIPTION OF TRANSACTION	PAYMENT/DEBIT (-)		✓ T	FEE (IF ANY) (-)	DEPOSIT/CREDIT (+)		BALANCE	
			$			$	$		$	

ASSIGNMENT SHEET #11

THE 5TH NATIONAL BANK
Spirits, America 00000

Dr. John E. Doe
300 North 13th Street
Spirits, America 00000

101-491-9 E

CHECKS	CHECKS	DEPOSITS	NO. OF CHECKS	DATE	BALANCE
		BALANCE FORWARD		12-30	2,043.38
144.15	200.00			1-2	1,699.23
6.08				1-2	
58.70				1-2	
9.06				1-2	1,625.39
24.60				1-4	1,600.79
14.01				1-4	
58.70					
30.00				1-3	1,498.08
18.50	26.25			1-12	1,453.33
		350.00		1-13	1,803.33
25.00	35.75			1-15	
100.00	65.35				
58.70	75.00				
25.00				1-19	1,418.53
		300.00		1-19	1,718.53
15.45					
6.00					
175.00				1-21	1,522.08
		425.00		1-21	1,947.08
75.00	58.70			1-26	1,813.38
	2.97 SC				1,810.41

PLEASE EXAMINE STATEMENT OF ACCOUNT AND VOUCHERS AT ONCE
IF NO ERROR IS REPORTED IN TEN DAYS THE ACCOUNT WILL BE CONSIDERED CORRECT

↑ LAST AMOUNT IN THIS COLUMN IS YOUR BALANCE

KEY

SC - SERVICE CHARGES
EC - ERROR CORRECTED
RT - RETURNED ITEM
CC - CERTIFIED CHECK
DM - DEBIT MEMO
CM - CREDIT MEMO
OD - OVERDRAFT
NC - NO COUNT
LS - TOTAL OF SEVERAL ITEMS

KINDLY NOTIFY THIS BANK IMMEDIATELY OF CHANGE OF ADDRESS

ASSIGNMENT SHEET #11

JOHN DOE, M.D.
BANK RECONCILIATION
JANUARY 31, 1980

Balance per bank statement $____________________

+Deposit not on shown on statement $____________________

$____________________

Less Outstanding Checks

No___ - $____________

No___ - $____________

No___ - $____________

No___ - $____________

No___ - $____________

No___ - $____________

No___ - $____________

Total Outstanding Checks $____________________

Adjusted Bank Balance $____________________

Balance per Checkbook $____________________

Minus:

Debit Memo $____________

Service Charges $____________

Adjusted checkbook balance $____________

MA - 279-C

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #12--COMPLETE PETTY CASH SUMMARY

NAME_______________________________________ SCORE________________

As a business office assistant, you will be responsible for preparing vouchers for all petty cash disbursements, and for depositing $50.00 into the fund each month.

PART I

During the month of August the following transactions occurred. Complete a voucher for each transaction listed below. Use your name on the "approved by" line.

(NOTE: Remember, you have $50.00 in your fund.)

August 6	Gave Marvell Pippin $10.00 for postage stamps (office expense)
August 8	Gave Susan Hedrick $5.00 to buy coffee (miscellaneous)
August 10	Gave $12.00 to Kenneth Helt for repairing lock on door (miscellaneous)
August 13	Gave $3.00 to Jean Grant for emergency supplies (miscellaneous)
August 19	Gave $2.50 to Bonnie Glover for carbon paper (office supplies)
August 21	Gave $3.00 to Sara Swartz for an extension cord (office expense)
August 22	Gave $3.50 to Gerry Hall for pencils (office expense)
August 28	Made $16.00 donation to Boy Scouts (miscellaneous)

ASSIGNMENT SHEET #12

No.___ Amount $________

PETTY CASH VOUCHER

Date____________

Paid to______________________

For______________________

Charge to______________________

Approved by______________________

Received by______________________

No.___ Amount $________

PETTY CASH VOUCHER

Date____________

Paid to______________________

For______________________

Charge to______________________

Approved by______________________

Received by______________________

No.___ Amount $________

PETTY CASH VOUCHER

Date____________

Paid to______________________

For______________________

Charge to______________________

Approved by______________________

Received by______________________

No.___ Amount $________

PETTY CASH VOUCHER

Date____________

Paid to______________________

For______________________

Charge to______________________

Approved by______________________

Received by______________________

MA - 285-C

ASSIGNMENT SHEET #12

No.___ Amount $______

PETTY CASH VOUCHER

Date__________

Paid to______________________

For__________________________

Charge to____________________

Approved by__________________

Received by__________________

No___ Amount $______

PETTY CASH VOUCHER

Date__________

Paid to______________________

For__________________________

Charge to____________________

Approved by__________________

Received by__________________

No.___ Amount $______

PETTY CASH VOUCHER

Date__________

Paid to______________________

For__________________________

Charge to____________________

Approved by__________________

Received by__________________

No.___ Amount $______

PETTY CASH VOUCHER

Date__________

Paid to______________________

For__________________________

Charge to____________________

Approved by__________________

Received by__________________

ASSIGNMENT SHEET #12

PART II

Use the space provided below to prepare a petty cash summary, listing the totals of cash payments for each classification and the amount on hand, if any.

(NOTE: Use vouchers #1-#8.)

Example: Office expense. $10.00

ASSIGNMENT SHEET #12

PART III

Fill in petty cash book and replenish account with a check for $50.00.

PETTY CASH FUND		DATE	EXPLANATION	VOUCHER NO.	DISTRIBUTION OF PAYMENTS			
RECEIVED	PAID OUT				ADVERTISING EXPENSE	DELIVERY EXPENSE	MISC. EXPENSES	OFFICE EXPENSE

BUSINESS PROCEDURES
UNIT V

ASSIGNMENT SHEET #13--COMPLETE INSURANCE FORM

NAME ______________________________ SCORE ________________

The business office assistant will be responsible for completing the insurance forms in the medical office. There are many kinds of forms but they all reach the same goal, to assist in the payment of the medical treatment.

Use your own name, information about yourself and your doctor to complete the form down to question number 14. Then use the information provided below.

Some offices will use a procedure number, other offices will list treatment statements, or both. Use both methods for this assignment to acquaint yourself with using treatment statements and numbers.

DIAGNOSIS: ANGINA PECTORIS

DATE	PROCEDURE CODE	MEDICAL SERVICES PROVIDED
6/20	90220	Initial complete physical (ICU)
6/21	90250	Unit visit per diem (ICU)
6/22, 23	9026	Visit per diem (Floor)
6/24	90275	Final exam and discharge
7/10	90040	Follow-up routine
7/10	93000	EKG
7/10	94475	Lab. triglycerides

(NOTE: Obtain current charges for each of the medical services provided and list under "Medical Services Provided.")

ASSIGNMENT SHEET #13

HEALTH INSURANCE
CLAIM FORM

READ INSTRUCTIONS BEFORE COMPLETING OR SIGNING THIS FORM

TYPE OR PRINT ☐ MEDICARE ☐ MEDICAID ☐ CHAMPUS ☐ OTHER

PATIENT & INSURED (SUBSCRIBER) INFORMATION

1 PATIENT'S NAME *(First name, middle initial, last name)*

2 PATIENT'S DATE OF BIRTH

3 INSURED'S NAME *(First name, middle initial, last name)*

4 PATIENT'S ADDRESS *(Street, city, state, ZIP code)*

5 PATIENT'S SEX MALE ☐ ☐ FEMALE

6 INSURED'S I.D. No. or **MEDICARE No.** *(Include any letters)*

7 PATIENT'S RELATIONSHIP TO INSURED SELF ☐ SPOUSE ☐ CHILD ☐ OTHER ☐

8 INSURED'S GROUP NO. *(Or Group Name)*

9 OTHER HEALTH INSURANCE COVERAGE - Enter Name of Policyholder and Plan Name and Address and Policy or Medical Assistance Number

10 WAS CONDITION RELATED TO

A PATIENT'S EMPLOYMENT YES ☐ ☐ NO

B AN AUTO ACCIDENT YES ☐ ☐ NO

11 INSURED'S ADDRESS *(Street, city, state, ZIP code)*

12 PATIENT'S OR AUTHORIZED PERSON'S SIGNATURE *(Read back before signing)*

I Authorize the Release of any Medical Information Necessary to Process this Claim and Request Payment of MEDICARE CHAMPUS Benefits Either to Myself or to the Party Who Accepts Assignment Below

SIGNED *DATE*

13 *I AUTHORIZE PAYMENT OF MEDICAL BENEFITS TO UNDERSIGNED PHYSICIAN OR SUPPLIER FOR SERVICE DESCRIBED BELOW*

SIGNED (Insured or Authorized Person)

PHYSICIAN OR SUPPLIER INFORMATION

14 DATE OF ◀ ILLNESS (FIRST SYMPTOM) OR INJURY (ACCIDENT) OR PREGNANCY (LMP)

15 DATE FIRST CONSULTED YOU FOR THIS CONDITION

16 HAS PATIENT EVER HAD SAME OR SIMILAR SYMPTOMS? YES ☐ ☐ NO

17 DATE PATIENT ABLE TO RETURN TO WORK

18 DATES OF TOTAL DISABILITY FROM THROUGH

DATES OF PARTIAL DISABILITY FROM THROUGH

19 NAME OF REFERRING PHYSICIAN

20 FOR SERVICES RELATED TO HOSPITALIZATION GIVE HOSPITALIZATION DATES ADMITTED DISCHARGED

21 NAME & ADDRESS OF FACILITY WHERE SERVICES RENDERED *(If other than home or office)*

22 WAS LABORATORY WORK PERFORMED OUTSIDE YOUR OFFICE? YES ☐ ☐ NO CHARGES

23 DIAGNOSIS OR NATURE OF ILLNESS OR INJURY. RELATE DIAGNOSIS TO PROCEDURE IN COLUMN D BY REFERENCE TO NUMBERS 1, 2, 3, ETC. OR DX CODE ▼

1

2

3

4

24 A DATE OF SERVICE	B * PLACE OF SERVICE	C FULLY DESCRIBE PROCEDURES, MEDICAL SERVICES OR SUPPLIES FURNISHED FOR EACH DATE GIVEN PROCEDURE CODE (IDENTIFY)	*(EXPLAIN UNUSUAL SERVICES OR CIRCUMSTANCES)*	D DIAGNOSIS CODE	E CHARGES	F

25 SIGNATURE OF PHYSICIAN OR SUPPLIER *(Read back before signing)*

SIGNED DATE

26 ACCEPT ASSIGNMENT (GOVERNMENT CLAIMS ONLY) (SEE BACK) YES ☐ ☐ NO

27 TOTAL CHARGE

28 AMOUNT PAID

29 BALANCE DUE

30 YOUR SOCIAL SECURITY NO.

31 PHYSICIAN'S OR SUPPLIER'S NAME, ADDRESS, ZIP CODE & *TELEPHONE NO.*

32 YOUR PATIENT'S ACCOUNT NO.

33 YOUR EMPLOYER I.D. NO.

I.D. NO.

* PLACE OF SERVICE CODES

1 — (IH) — INPATIENT HOSPITAL
2 — (OH) — OUTPATIENT HOSPITAL
3 — (O) — DOCTOR'S OFFICE
4 — (H) — PATIENT'S HOME
5 — DAY CARE FACILITY (PSY)
6 — NIGHT CARE FACILITY (PSY)
7 — (NH) — NURSING HOME
8 — (SNF) — SKILLED NURSING FACILITY
9 — AMBULANCE
0 — (OL) — OTHER LOCATIONS
A — (IL) — INDEPENDENT LABORATORY
B — OTHER MEDICAL/SURGICAL FACILITY

APPROVED BY AMA COUNCIL ON MEDICAL SERVICE 8-74

BUSINESS PROCEDURES
UNIT V

ANSWERS TO ASSIGNMENT SHEETS

Assignment Sheet #1

Evaluated to the satisfaction of the instructor

Assignment Sheet #2

CHARGE SLIPS

Kim R. Truitt, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE May 25, 19--
PATIENT Cathy Winston
OFFICE CALL.... $15.00
LABORATORY... 10.00
X-RAY.......... 20.00
INJECTION...... —
OTHER.......... —
TOTAL... $45.00
NEXT APPT. ______

Please leave this slip with receptionist.

Kim R. Truitt, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE May 25, 19--
PATIENT Candy Osborne
OFFICE CALL.... $15.00
LABORATORY... ______
X-RAY.......... ______
INJECTION...... $10.00
OTHER.......... ______
TOTAL... $25.00
NEXT APPT. ______

Please leave this slip with receptionist.

Kim R. Truitt, M.D.
600 N. Elm
Anycity, Oklahoma 65432

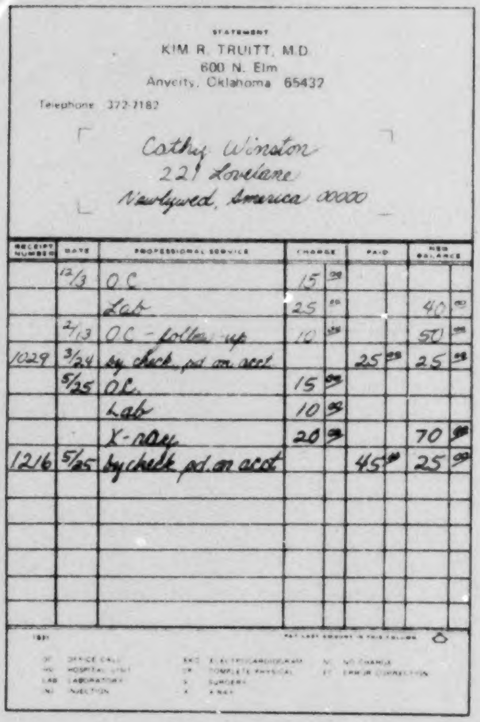
DATE May 25, 19--
PATIENT James Reid
OFFICE CALL ______
LABORATORY 15.00
X-RAY.......... ______
INJECTION...... ______
OTHER.......... ______
O.C. Follow-up $10.00
TOTAL... $25.00
NEXT APPT. ______

Please leave this slip with receptionist.

Daily Log Journal Page

		NAME	SERVICE RENDERED	√	CHARGE		PAID	
8	00							
	15							
	30							
	45							
9	00	Cathy Winston	Chest X-ray; Throat culture; O.C.	√	45	00	45	00
	15							
	30							
	45							
10	00	Candy Osborne	O.C.; Injection	√	25	00	25	00
	15							
	30							
	45							
11	00	James Reid	O.C. Follow-up; Lab	√	25	00	15	00
	15							
	30							
	45							
12	00							
	15							
	30							
	45							

Ledger sheets



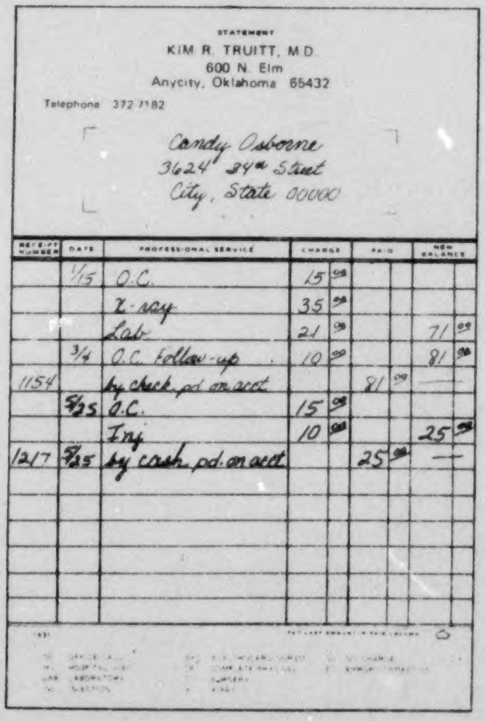
STATEMENT
KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432
Telephone 372-7182

Cathy Winston
221 Lovelane
Newlywed, America 00000

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE		PAID		NEW BALANCE	
	12/3	O.C.	15	00				
		Lab	25	00			40	00
	2/13	O.C. - follow-up	10	00			50	00
1029	3/24	by check, pd on acct			25	00	25	00
	5/25	O.C.	15	00				
		Lab	10	00				
		X-ray	20	00			70	00
1216	5/25	by check pd. on acct			45	00	25	00

PAY LAST AMOUNT IN THIS COLUMN

OC OFFICE CALL
HV HOSPITAL VISIT
LAB LABORATORY
INJ INJECTION
EKG ELECTROCARDIOGRAM
CP COMPLETE PHYSICAL
S SURGERY
X X-RAY
NC NO CHARGE
EC ERROR CORRECTION

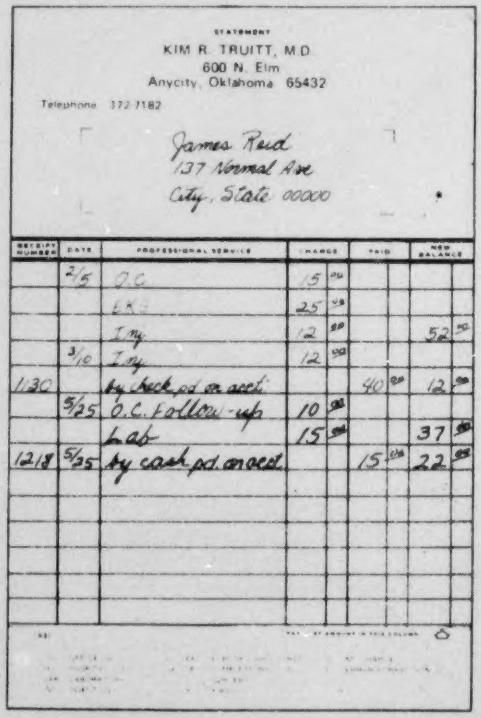


STATEMENT
KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432
Telephone 372-7182

Candy Osborne
3624 34th Street
City, State 00000

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE		PAID		NEW BALANCE	
	1/15	O.C.	15	00				
		X-ray	35	00				
		Lab	21	00			71	00
	3/4	O.C. Follow-up	10	00			81	00
1154		by check pd on acct			81	00	—	
	5/25	O.C.	15	00				
		Inj	10	00			25	00
1217	5/25	by cash pd. on acct			25	00	—	

PAY LAST AMOUNT IN THIS COLUMN



STATEMENT
KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432
Telephone 372-7182

James Reid
137 Normal Ave
City, State 00000

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE		PAID		NEW BALANCE	
	2/5	O.C.	15	00				
		EKG	25	00				
		Inj.	12	00			52	00
	3/10	Inj.	12	00				
1130		by check pd on acct.			40	00	12	00
	5/25	O.C. Follow-up	10	00				
		Lab	15	00			37	00
1218	5/25	by cash pd. on acct.			15	00	22	00

PAY LAST AMOUNT IN THIS COLUMN

MA - 297-C

Receipts

Telephone 372-7182 1216

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE May 25, 19--

RECEIVED OF Cathy Winston $ 45.00
[✓ Check] Currency Forty-five and $\frac{00}{100}$ DOLLARS
On Account of Cathy Winston
Account Total $ 70.00
Amount Paid $ 45.00 Per
Balance Due $ 25.00

Kindly retain this receipt for tax purposes.

Telephone 372-7182 1217

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE May 25, 19--

RECEIVED OF Candy Osborne $ 25.00
Check [✓ Currency] Twenty-five and $\frac{00}{100}$ DOLLARS
On Account of Candy Osborne
Account Total $ 25.00
Amount Paid $ 25.00 Per
Balance Due $ ——

Kindly retain this receipt for tax purposes.

Telephone 372-7182 1218

KIM R. TRUITT, M.D.
600 N. Elm
Anycity, Oklahoma 65432

DATE May 25, 19--

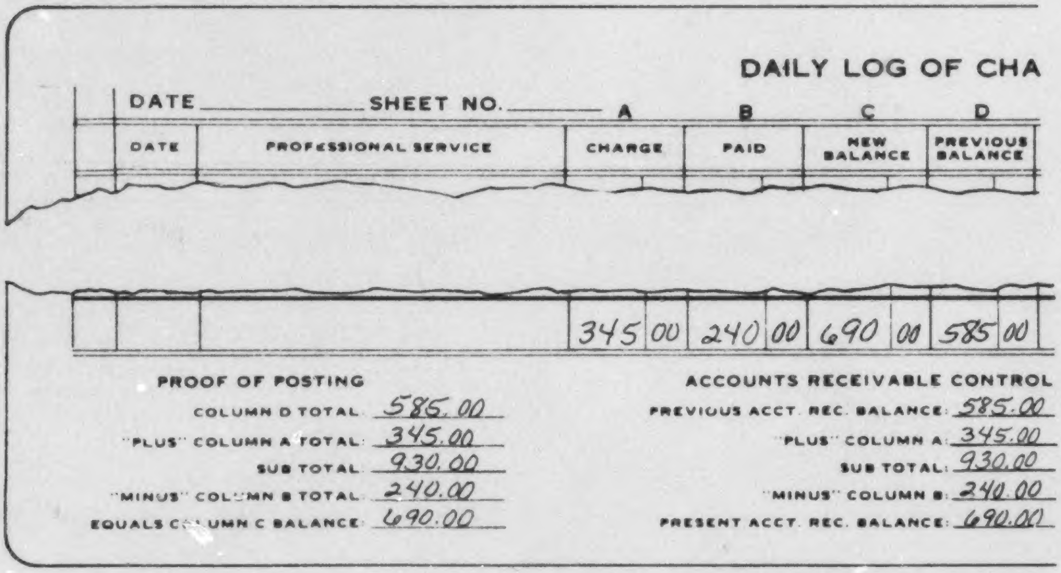
RECEIVED OF James Reid $ 15.00
Check [✓ Currency] Fifteen and $\frac{00}{100}$ DOLLARS
On Account of James Reid
Account Total $ 37.00
Amount Paid $ 15.00 Per
Balance Due $ 22.00

Kindly retain this receipt for tax purposes.

Assignment Sheet #3

Evaluated to the satisfaction of the instructor

Assignment Sheet #4



DAILY LOG OF CHA

DATE __________ SHEET NO. ________

DATE	PROFESSIONAL SERVICE	A CHARGE	B PAID	C NEW BALANCE	D PREVIOUS BALANCE
		345 00	240 00	690 00	585 00

PROOF OF POSTING

COLUMN D TOTAL: 585.00

"PLUS" COLUMN A TOTAL: 345.00

SUB TOTAL: 930.00

"MINUS" COLUMN B TOTAL: 240.00

EQUALS COLUMN C BALANCE: 690.00

ACCOUNTS RECEIVABLE CONTROL

PREVIOUS ACCT. REC. BALANCE: 585.00

"PLUS" COLUMN A: 345.00

SUB TOTAL: 930.00

"MINUS" COLUMN B: 240.00

PRESENT ACCT. REC. BALANCE: 690.00

Assignment Sheet #5

1. $410.00
2. $528.00
3. $850.00

Assignment Sheet #6

Deposit #1

CHECKING ACCOUNT DEPOSIT TICKET

NAME Margaret Reynolds, M.D.

80 Next Door St., Fun City, Oklahoma 12345

DATE (current date) 19

CASH	CURRENCY	36	00
	COIN		
LIST CHECKS SINGLY			
Braun, Bill		50	00
Jones, Joe		100	00
Bardessi, Sons		14	00
TOTAL FROM OTHER SIDE		35	00
TOTAL		235	00
$ LESS CASH RECEIVED			
NET DEPOSIT		235	00

[redacted]

86-00
1090

USE OTHER SIDE FOR ADDITIONAL LISTING

BE SURE EACH ITEM IS PROPERLY ENDORSED

THE STUDENTS' BANK OF OKLAHOMA

36-444-1 Account Number

CHECKS AND OTHER ITEMS ARE RECEIVED FOR DEPOSIT SUBJECT TO THE PROVISIONS OF THE UNIFORM COMMERCIAL CODE OR ANY APPLICABLE COLLECTION AGREEMENT

CHECKS LIST SINGLY	DOLLARS	CENTS
1 Mayfield, Wanda	35	00
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
TOTAL	35	00

ENTER TOTAL ON THE FRONT OF THIS TICKET

Deposit #2

CHECKING ACCOUNT DEPOSIT TICKET

NAME Kim R. Truitt, M.D.

600 N. Elm, Anycity, Oklahoma 65432

DATE (Current date) 19

CASH	CURRENCY	31	00
	COIN		
LIST CHECKS SINGLY			
Raines, Janet		25	00
Marnone, Lynne		55	00
Hefner, Jackie		4	78
TOTAL FROM OTHER SIDE		67	52
TOTAL		183	30
$ LESS CASH RECEIVED			
NET DEPOSIT		183	30

[redacted]

86-00
1090

USE OTHER SIDE FOR ADDITIONAL LISTING

BE SURE EACH ITEM IS PROPERLY ENDORSED

THE STUDENTS' BANK OF OKLAHOMA

77-150-1 Account Number

CHECKS AND OTHER ITEMS ARE RECEIVED FOR DEPOSIT SUBJECT TO THE PROVISIONS OF THE UNIFORM COMMERCIAL CODE OR ANY APPLICABLE COLLECTION AGREEMENT

CHECKS LIST SINGLY	DOLLARS	CENTS
1 Hefner, Jackie B.	67	52
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
TOTAL	67	52

ENTER TOTAL ON THE FRONT OF THIS TICKET

MA - 301-C

Assignment Sheet #7

MONTH January 19 – –

DATE	PAID TO	CHECK NO.	FOR	AMOUNT PAID	CLINICAL SUPPLIES	LABORA-TORY	OFFICE SUPPLIES	UTILITIES	SALARIES	LAUNDRY	OFFICE PAYMENT UPKEEP	PERSONAL EXPENSES
1-2	Clinitex Supply Co.	001	Clinical Supplies	144 15	144 15							
1-2	Realty Investment Co.	002	Rent	800 00							800 00	
1-2	Ding-A-Ling Telephone Co.	003	Telephone	150 00				150 00				
1-2	Mark Simpson	004	Salary	58 70					58 70			
1-2	City of FunCity	005	Office taxes	9 06							9 06	
1-3	Peter Hank	006	Office repairs	30 00							30 00	
1-4	Provincial Insurance Co.	007	Liability insurance	24 60								24 60
1-4	Public Service Elect. & Gas Co.	008	Utilities	65 00				65 00				
1-7	National Medical Supply Co	009	Supplies/Clinical	18 75	18 75							
1-7	Mark Simpson	010	Salary	58 70					58 70			
1-8	Trades Hotel	011	Meeting	200 00								200 00
1-8	Pure Cleaning Services	012	Cleaning Office	75 00							75 00	
1-9	Cable Company	013	Office Supplies	18 50			18 50					
1-12	SS White Medical Manufacturing Co.	014	Supplies/Clinical	85 00	85 00							
1-13	American Medical Association	015	Dues	125 00								125 00
1-13	Association for the Blind	016	Donation	25 00								25 00
1-13	Coffee Bean Co.	017	Office Supplies	100 00			100 00					
1-14	Mark Simpson	018	Salary	58 70					58 70			
1-15	Sterile Drape Co.	019	Clinical drapes	25 00	25 00							
1-15	Keystone Printing Co.	020	Office Stationery	35 75			35 75					
1-17	Hotel Traymore	021	Convention	250 00								250 00
1-19	Cash	022	Personal	75 00								75 00
1-19	Mark Simpson	023	Salary	58 70					58 70			
1-21	Reale Towel Supply	024	Laundry service.	15 45						15 45		
1-22	Reader's Digest	025	Office magazine	4 63								4 63
1-24	Medical Digest	026	Professional mag.	35 00								35 00
1-27	Warren Laboratory	027	Lab. fees	175 00		175 00						
1-29	Easy Repair Company	028	Typewriter repair	75 00			75 00					
			TOTALS	2,795 69	272 90	175 00	229 25	215 00	234 80	15 45	914 06	739 23

Assignment Sheet #8

19____	Clinical Supplies	Laboratory	Office Supplies	Office Payment/Upkeep	Utilities	Laundry	Salaries	Misc.
JANUARY	$ 272.90	$ 175.00	$ 229.25	$ 914.06	$ 215.00	$15.45	$ 234.80	$ 739.23
FEBRUARY	620.00	223.00	430.00	1,200.00	225.00	150.00	525.00	150.00
MARCH	444.00	200.00	180.00	990.00	236.00	75.00	525.00	400.00
APRIL	750.00	150.00	200.00	890.00	180.00	160.00	525.00	350.00
MAY	800.00	390.00	525.00	1,600.00	90.00	86.00	525.00	300.00
JUNE	500.00	290.00	300.00	1,700.00	96.00	200.00	565.00	250.75
JULY	320.00	330.00	150.00	950.00	125.85	400.00	525.00	340.00
AUGUST	85.00	223.00	730.00	1,300.00	240.00	57.00	525.00	60.00
SEPTEMBER	72.00	140.00	54.00	1,290.00	140.00	85.00	525.00	95.00
OCTOBER	920.00	340.75	75.00	1,329.00	65.00	64.00	525.00	45.00
NOVEMBER	500.00	140.00	45.00	1,400.00	100.00	50.00	525.00	89.00
DECEMBER	150.00	235.00	25.00	1,300.00	85.00	90.00	750.00	50.00
TOTALS	$5,433.90	$2,836.75	$2,943.25	$14,863.06	$1,797.85	$1,432.45	$6,274.80	$2,868.98

Assignment Sheet #10

NO. 001 $ 30.80
DATE 7-1 19 80
TO Ding-A-Ling Telephone Co.
FOR Telephone bill

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$5,043	38
AMT. DEPOSITED		—
TOTAL	$5,043	38
AMT. THIS CHECK	30	80
BAL. CAR'D FOR'D	$5,012	58

JAMES TAYLOR, M.D. 001

July 1 19 80 $\frac{88\text{-}2398}{1119}$

PAY TO THE ORDER OF Ding-A-Ling Telephone Company $ 30 $\frac{80}{100}$

Thirty dollars and $\frac{80}{100}$ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Telephone bill James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. 002 $ 23.01
DATE 7-2 19 80
TO Anycity Gas Company
FOR Gas bill

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$5,012	58
AMT. DEPOSITED		—
TOTAL	$5,012	58
AMT. THIS CHECK	23	01
BAL. CAR'D FOR'D	$4,989	57

JAMES TAYLOR, M.D. 002

July 2 19 80 $\frac{88\text{-}2398}{1119}$

PAY TO THE ORDER OF Anycity Gas Company $ 23 $\frac{01}{100}$

Twenty-three dollars and $\frac{01}{100}$ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Gas bill James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. 003 $ 43.80
DATE 7-3 19 80
TO Anycity Power & Light
FOR Electricity

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$4,989	57
AMT. DEPOSITED		—
TOTAL	$4,989	57
AMT. THIS CHECK	43	80
BAL. CAR'D FOR'D	$4,945	77

JAMES TAYLOR, M.D. 003

July 3 19 80 $\frac{88\text{-}2398}{1119}$

PAY TO THE ORDER OF Anycity Power and Light $ 43 $\frac{80}{100}$

Forty-three dollars and $\frac{80}{100}$ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Electricity James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. 004 $ 12.82
DATE 7-4 19 80
TO Anycity Water Supply
FOR Water

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$4,945	77
AMT. DEPOSITED		—
TOTAL	$4,945	77
AMT. THIS CHECK	12	82
BAL. CAR'D FOR'D	$4,932	95

JAMES TAYLOR, M.D. 004

July 4 19 80 $\frac{88\text{-}2398}{1119}$

PAY TO THE ORDER OF Anycity Water Supply $ 12 $\frac{82}{100}$

Twelve dollars and $\frac{82}{100}$ DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Water James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. 005 $ 40.00
DATE 7-5 19 80
TO Sparkling Cleaning Service
FOR Cleaning Office

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$4,932	95
AMT. DEPOSITED		—
TOTAL	$4,932	95
AMT. THIS CHECK	40	00
BAL. CAR'D FOR'D	$4,892	95

JAMES TAYLOR, M.D. 005

July 5 19 80 88-2398/1119

PAY TO THE ORDER OF Sparkling Cleaning Service $ 40 00/100

Forty dollars and 00/100 DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Cleaning office James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. 006 $ 180.00
DATE 7-6 19 80
TO National Supply Co.
FOR Office supplies

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$4,892	95
AMT. DEPOSITED	550	00
TOTAL	$5,442	95
AMT. THIS CHECK	180	00
BAL. CAR'D FOR'D	$5,262	95

JAMES TAYLOR, M.D. 006

July 6 19 80 88-2398/1119

PAY TO THE ORDER OF National Supply Company $ 180 00/100

One hundred eighty dollars and 00/100 DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Office supplies James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. 007 $ 37.75
DATE 7-7 19 80
TO Quickie Printing Co.
FOR Office Stationery

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$5,262	95
AMT. DEPOSITED		—
TOTAL	$5,262	95
AMT. THIS CHECK	37	75
BAL. CAR'D FOR'D	$5,225	20

JAMES TAYLOR, M.D. 007

July 7 19 80 88-2398/1119

PAY TO THE ORDER OF Quickie Printing Company $ 37 75/100

Thirty-seven dollars and 75/100 DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Office stationery James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

NO. 008 $ 35.00
DATE 7-8 19 80
TO So-Dry Towel Supply Co.
FOR Laundry Service

	DOLLARS	CENTS
BAL. BRO'T FOR'D	$5,225	20
AMT. DEPOSITED		—
TOTAL	$5,225	20
AMT. THIS CHECK	35	00
BAL. CAR'D FOR'D	$5,190	20

JAMES TAYLOR, M.D. 008

July 8 19 80 88-2398/1119

PAY TO THE ORDER OF So-Dry Towel Supply Company $ 35 00/100

Thirty-five dollars and 00/100 DOLLARS

HOME TOWN BANK
Your Town, Oklahoma

Laundry service James Taylor, M.D.

⑆1119⑈2398⑆ ⑈214⑈231⑈7⑈

Assignment Sheet #11

RECORD ALL CHARGES OR CREDITS THAT AFFECT YOUR ACCOUNT

NUMBER	DATE	DESCRIPTION OF TRANSACTION	PAYMENT/DEBIT (−)		√ T	FEE (IF ANY) (−)	DEPOSIT/CREDIT (+)		BALANCE	
									2,043	38
001	1-2	Clinitex Supply Company	144	15	√				1,899	23
002	1-2	Realty Investment Co.	200	00	√				1,699	23
003	1-2	Ding-A-Ling Telephone Co.	6	08	√				1,693	15
004	1-2	Mark Simpson	58	70	√				1,634	45
005	1-2	City of Fun City	9	06	√				1,625	39
006	1-3	Peter Hook	30	00					1,595	39
007	1-4	Provincial Insurance Co.	24	60	√				1,570	79
008	1-4	Public Service Electric & Gas	14	01	√				1,556	78
009	1-7	National Medical Supply Co.	18	75					1,538	03
010	1-7	Mark Simpson	58	70	√				1,479	33
011	1-8	Cash	100	00	√				1,379	33
012	1-8	Pure Cleaning Services	30	00	√				1,349	33
013	1-9	Cable Company	18	50	√				1,330	83
014	1-12	S.S. White Medical Manufacturing Co.	26	25	√		350	00	1,654	58
015	1-13	American Medical Association	125	00					1,529	58
016	1-13	Association for the Blind	25	00	√				1,504	58
017	1-13	Cash	100	00					1,404	58
018	1-14	Mark Simpson	58	70	√				1,345	88
019	1-15	Cash	25	00	√				1,320	88
020	1-15	Keystone Printing Co.	35	75	√				1,285	13
021	1-17	Hotel Traymore	65	35	√				1,219	78
022	1-19	Cash	75	00	√		300	00	1,444	78
023	1-19	Mark Simpson	58	70	√				1,386	08
024	1-21	Reale Towel Supply	15	45	√				1,370	63
025	1-22	Reader's Digest	4	63					1,366	00
026	1-24	Medical Digest	6	00	√				1,360	00
027	1-27	Warren Laboratory	175	00	√		425	00	1,610	00
028	1-29	Cash	75	00	√				1,535	00

JOHN DOE, M.D.
BANK RECONCILIATION
JANUARY 31, 1980

Balance per bank statement $

+Deposit not on shown on statement $

$ 1,810.41

Less Outstanding Checks

No 006 - $ 30.00

No 009 - $ 18.75

No 015 - $ 125.00

No 017 - $ 100.00

No 025 - $ 4.63

No - $

No - $

Total Outstanding Checks $ 278.38

Adjusted Bank Balance $ 1,532.03

881

308-C

M.D.
LIATION
, 1980

Balance per Checkbook $ 1,535.00

Minus:

Debit Memo $

Service Charges $ 2.97

Adjusted checkbook balance $

882

MA - 309-C

Assignment Sheet #12

Part I

No. 1 Amount $ 10.00

PETTY CASH VOUCHER

Date 8-6

Paid to Marvell Pippin

For Postage Stamps

Charge to Office expense

Approved by

Received by

No. 2 Amount $ 5.00

PETTY CASH VOUCHER

Date 8-8

Paid to Susan Hedrick

For Coffee

Charge to Miscellaneous

Approved by

Received by

No. 3 Amount $ 12.00

PETTY CASH VOUCHER

Date 8-10

Paid to Kenneth Helt

For Repairing lock

Charge to Miscellaneous

Approved by

Received by

No. 4 Amount $ 3.00

PETTY CASH VOUCHER

Date 8-13

Paid to Jean Grant

For Emergency Supplies

Charge to Miscellaneous

Approved by

Received by

No. 5 Amount $ 2.50

PETTY CASH VOUCHER

Date 8-19

Paid to Bonnie Glover

For Carbon paper

Charge to Office Supplies

Approved by __________

Received by __________

No. 6 Amount $ 3.00

PETTY CASH VOUCHER

Date 8-21

Paid to Sara Swartz

For Extension Cord

Charge to Office Expense

Approved by __________

Received by __________

No. 7 Amount $ 3.50

PETTY CASH VOUCHER

Date 8-22

Paid to Gerry Hall

For Pencils

Charge to Office Expense

Approved by __________

Received by __________

No. 8 Amount $ 16.00

PETTY CASH VOUCHER

Date 8-28

Paid to Boy Scouts

For Donation

Charge to Miscellaneous

Approved by __________

Received by __________

Part II

Office Expense --$10.00
3.00
3.50
2.50
Total $19.00

Miscellaneous --$ 5.00
12.00
3.00
16.00
Total $36.00

$50.00
- 55.00
-$5.00

Part III

PETTY CASH FUND		DATE	EXPLANATION	VOUCHER NO.	DISTRIBUTION OF PAYMENTS			
RECEIVED	PAID OUT				ADVERTISING EXPENSE	DELIVERY EXPENSE	MISC. EXPENSES	OFFICE EXPENSE
	10 00	8 6	Postage Stamps	1				10 00
	5 00	8 8	Coffee	2			5 00	
	12 00	8 10	Repairing Lock	3			12 00	
	3 00	8 13	Emergency Supplies	4			3 00	
	2 50	8 19	Carbon Paper	5				2 50
	3 00	8 21	Extension Cord	6				3 00
	3 50	8 22	Pencils	7				3 50
	16 00	8 28	Donation	8			16 00	
50 00								

Assignment Sheet #13

Evaluated to the satisfaction of the instructor

BUSINESS PROCEDURES
UNIT V

TEST

NAME______________________________ SCORE______________

1. Match terms associated with business procedures to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Signature on an official document

_____b. Permanent record of all expenditures for any given month

_____c. Form showing amount owed; usually sent out the last of each month

_____d. Form showing patient's name, services rendered, and fee charged

_____e. Permanent individual patient form that shows charges, payments, services rendered, and balance due

_____f. Involves management of all fees charged and payments received

_____g. Total amount of cash and checks prepared for safekeeping

_____h. Money used for miscellaneous office expenses

_____i. System of recording and summarizing all financial transactions

_____j. Permanent record showing each month's expenditures, charges and receipts, and yearly total for each

_____k. Financial coverage purchased through various companies to assist in payment of unexpected health expenses

_____l. Involves management of all expenses paid out for operation of an office

_____m. Gives acknowledgment for cash paid; written in duplicate form

_____n. Permanent record that shows all patients' names, services rendered, total fees charged, and payments received

1. Business procedures
2. Accounts receivable
3. Accounts payable
4. Charge slip
5. Receipt
6. Statement
7. Ledger
8. Daily log/journal
9. Monthly expense sheet
10. Yearly summary
11. Bank deposit
12. Health insurance
13. Endorsement
14. Petty cash

______o. Refers to length of time that charges are overdue

______p. Itemized list of cash and other funds entered to bank account for credit

______q. Numbered identification given to individuals by the government; used by employers and the Federal government as a reference for contributing funds for earnings insurance

______r. Completed by employee to determine withholding allowances for income tax purposes

______s. Type of payment that doctor makes if he or she employs more than four people in office

______t. Assigned to employer by Internal Revenue Service to be used in their accounting process

______u. Total of all wages paid and deductions withheld from the employee; to be used in filing income tax

______v. Summary of employee's earnings to be recorded quarterly for office files or reporting to government

______w. Policy that reimburses an employer for damages that he/she is required to pay an employee who has been hurt on the job

______x. Law passed to inform consumers of the cost of borrowing and purchasing on credit

15. Account age
16. Deposit slip
17. Social Security card
18. Employer identification number
19. Employee's earnings record
20. Employee's withholding certificate (Form W-4)
21. Wage and tax statement (Form W-2)
22. Federal unemployment tax
23. Federal Truth in Lending Act
24. Worker's compensation insurance

2. Describe requirements of the bookkeeping assistant.

____

____

____

____

____

____

____

3. List ways in which patients' accounts are handled.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

4. Match types of bookkeeping systems to the correct descriptions. Write the correct numbers in the blanks provided.

_____a. Involves use of computers and codes for procedures	1. Traditional log system
_____b. Requires separate written entries on a ledger card, daily receipt and log sheet	2. Pegboard (write-it-once)
_____c. Provides one entry on charge slip, daily journal, ledger card, receipt, appointment notice, and in some instances, a statement	3. Data processing

5. Complete the following chart on steps to follow through a collection system. Write the correct information in the blanks provided.

ACCOUNT AGE	COLLECTION ACTION
End of the month or 30 days	a. ____________________ ____________________ ____________________
b. ____________________ ____________________	Mail a second statement with a gently phrased reminder added by hand or typed; a pre-printed card, form letter, or, sticker are easier, but less efffective, alternatives
74 days	c. ____________________ ____________________
d. ____________________	Send a stronger letter or collection form, definitely asking for prompt attention

6. Select from the following list items listed on the charge slip and ledger. Mark each correct answer with an "X."

______a. Vital signs

______b. Date

______c. Patient's address

______d. Sex of patient

______e. Birthdate of patient

______f. Services rendered

______g. Itemized amount charged for services rendered

______h. Complete name, including first and middle names

______i. Total amount

______j. Patients medical and dental history

7. Arrange in order steps in using the daily log/journal page. Write a "1" before the first step, a "2" before the second step and so on in the blanks provided.

______a. Place a checkmark in column by name to indicate that information has been transferred to ledger card

______b. Enter information from patient ledger card to daily log/journal

______c. Give a receipt for payment if requested

______d. Enter information and charges from charge slip to patient ledger card during each visit

______e. Enter any payment received on account on the individual ledger cards, then on daily journal pages as "on account"

8. Arrange in order steps used to balance the daily log/journal page. Write a "1" before the first step, a "2" before the second step, and so on in the blanks provided.

______a. Total paid column

______b. Make sure that there is a checkmark for each entry

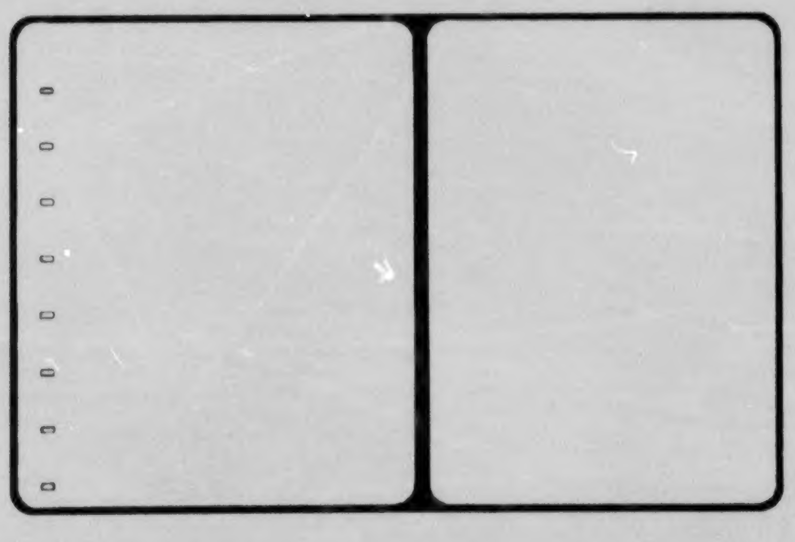
______c. Check appointment book to see that all patients' visits have been listed in daily log/journal page

______d. Bring totals from the charge and paid columns forward to next page for balance forward

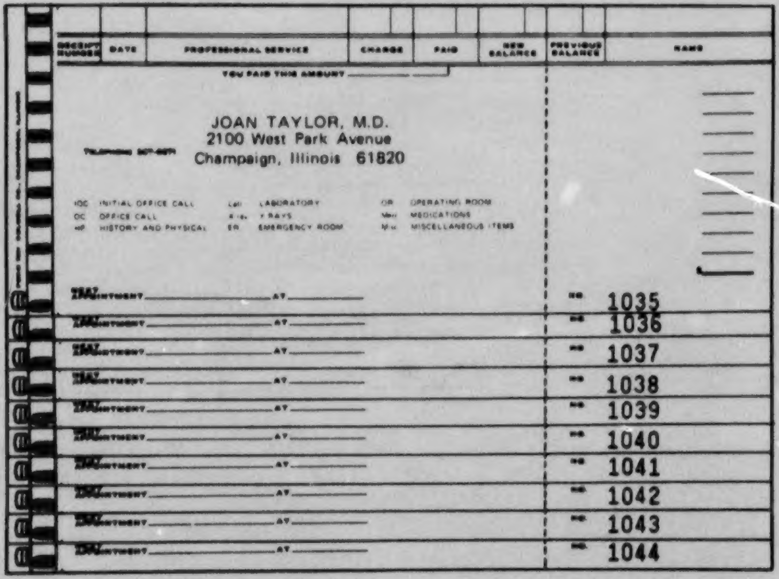
______e. Total charge column for amount of day's production

9. Identify the parts of pegboard system shown in the drawings below.

Fold-a-Log pegboard	Daily log of charges and receipts
Pegboard receipt and charge slip	Ledger card



a. ______________________________



RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE	PAID	NEW BALANCE	PREVIOUS BALANCE	NAME

YOU PAID THIS AMOUNT ________

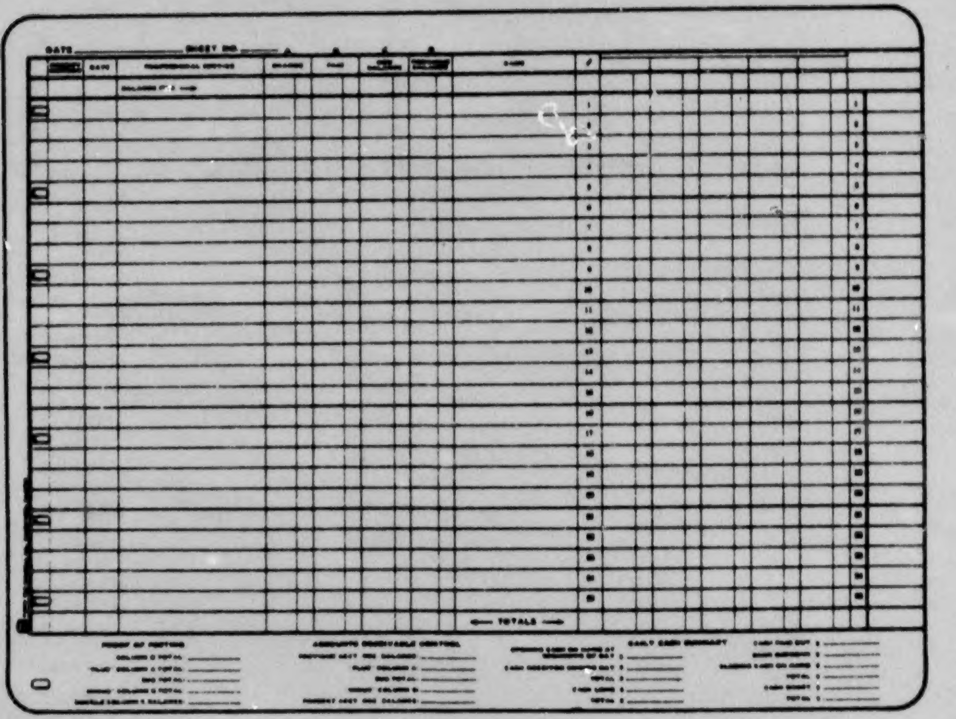
JOAN TAYLOR, M.D.
2100 West Park Avenue
Champaign, Illinois 61820

IOC	INITIAL OFFICE CALL	Lab	LABORATORY	OR	OPERATING ROOM
OC	OFFICE CALL	X-Ray	X RAYS	Med	MEDICATIONS
HP	HISTORY AND PHYSICAL	ER	EMERGENCY ROOM	Misc	MISCELLANEOUS ITEMS

NEXT APPOINTMENT ________ AT ________ No 1035
NEXT APPOINTMENT ________ AT ________ No 1036
NEXT APPOINTMENT ________ AT ________ No 1037
NEXT APPOINTMENT ________ AT ________ No 1038
NEXT APPOINTMENT ________ AT ________ No 1039
NEXT APPOINTMENT ________ AT ________ No 1040
NEXT APPOINTMENT ________ AT ________ No 1041
NEXT APPOINTMENT ________ AT ________ No 1042
NEXT APPOINTMENT ________ AT ________ No 1043
NEXT APPOINTMENT ________ AT ________ No 1044

b. ______________________________

313-C



DATE ______ SHEET NO. ______

A B C D

TOTALS

C. ______

STATEMENT

JOAN TAYLOR, M.D.
2100 West Park Avenue
TELEPHONE 367-6671 Champaign, Illinois 61820

MR. JIM SLOAN
2629 West Broad Street
Hamilton, N.J. 08555

RECEIPT NUMBER	DATE	PROFESSIONAL SERVICE	CHARGE		PAID		NEW BALANCE	

1631 PAY LAST AMOUNT IN THIS COLUMN ⇧

IOC	INITIAL OFFICE CALL	Lab	LABORATORY	OR	OPERATING ROOM
OC	OFFICE CALL	X-ray	X RAYS	Med	MEDICATIONS
HP	HISTORY AND PHYSICAL	ER	EMERGENCY ROOM	Misc	MISCELLANEOUS ITEMS

d. ____

10. List the methods of balancing daily log/journal page in the pegboard system.

a. ____

b. ____

11. Match special entries in bookkeeping systems to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Money received from business hired to collect overdue accounts

_____b. Special fee given to selected patients or professionals

_____c. Check returned by bank due to lack of funds in account

_____d. Partial or full payment to office from patient's coverage

1. Non-sufficient funds
2. Courtesy discount
3. Collection agency payment
4. Insurance claims

12. Describe steps in making a bank deposit.

____

____

____

13. Select from the following list items that appear on a monthly expense sheet. Mark each correct answer with an "X."

_____a. Office supplies

_____b. Laboratory fees

_____c. Laundry

_____d. Salaries

_____e. Miscellaneous

_____f. Utilities

_____g. Office payment and upkeep

14. Select from the following list items found on record of employees' salaries and tax deductions. Mark each correct answer with an "X."

_____a. Date paid

_____b. Name of employee

_____c. Total exemptions

_____d. Period paid for

______e. Other pay deductions

______f. Employee's birthdate

______g. Withholding (Federal income tax withheld)

______h. Earnings (gross salary)

______i. Social Security number

______j. Employee's beneficiary

______k. Social Security tax (FICA)

______l. Names of dependents

______m. Net salary

15. Describe the process of depositing withheld income tax and Social Security (FICA) taxes.

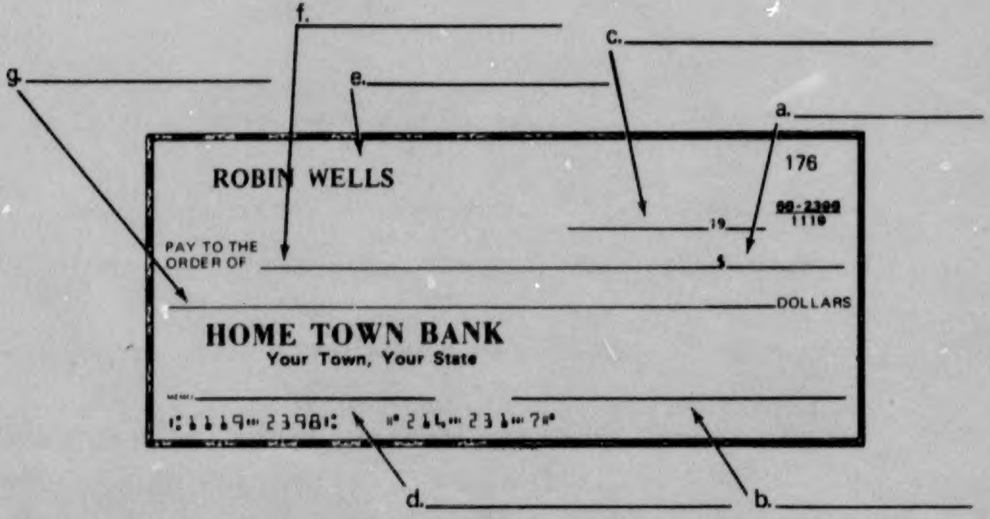
____

____

____

16. Identify the parts of a check shown in the drawing below. Write the correct terms in the blanks provided.

Amount of check in figures
Name of person or firm
Date
Amount of check in words
Signature of person making payment
Purpose of check
To whom check is paid


f. ______
c. ______
g. ______
e. ______
a. ______
ROBIN WELLS
176
19
PAY TO THE ORDER OF
$
DOLLARS
HOME TOWN BANK
Your Town, Your State
d. ______
b. ______

17. Select from the following list items that are needed on a check stub. Mark each correct answer with an "X."

______a. Date

______b. Purpose of check

______c. Amount deposited (if any)

______d. Name of bank

______e. Amount of this check

______f. Balance carried forward

______g. To whom check is paid

______h. Amount of previous check

______i. Signature

______j. Number of check

______k. Total

______l. Account number

______m. Policy number

______n. Claim number

______o. Balance brought forward

18. Arrange in order steps in reconciling bank statements. Write a "1" before the first step, a "2" before the second step, and so on in the blanks provided.

______a. Arrange cancelled checks numerically

______b. Check off (✓) all cancelled checks and deposits in the checkbook stub (register)

______c. Subtract total amount of outstanding checks from statement balance

______d. List outstanding checks (those not returned to bank) with check number and amount

______e. Make sure that adjusted bank balance and adjusted checkbook balance are equal

______f. Compare amount of cancelled checks and deposits with amounts written in checkbook stub (register)

______g. Verify amount of cancelled checks with amounts on bank statement

19. Describe handling of petty cash.

____

____

____

____

____

20. Distinguish between types of insurance programs. Write a "PR" before private insurance programs and a "PU" before public insurance programs in the blanks provided.

_____a. Professional organizations

_____b. Medicare

_____c. Commercial carriers

_____d. Medicaid

21. State six points to consider when filling out insurance forms.

a. ____

b. ____

c. ____

d. ____

e. ____

f. ____

22. Select from the following list basic information found on insurance claims. Mark each correct answer with an "X."

_____a. Past medical history

_____b. Diagnosis/symptoms

_____c. Age of beneficiary

_____d. Description of services and charges

_____e. Relationship of patient to policyholder

_____f. Policyholder's salary

_____g. Group number or claim number

_____h. Policyholder's name

_____i. Number of dependents

_____j. Other health insurance coverage

_____k. Initial information

_____l. Amount of FICA payment

_____m. Injury or condition related to occupation

23. Compose collection letters.
24. Complete charge slip, daily log journal, ledger sheet, and receipt.
25. Practice pegboard system.
26. Balance daily log in pegboard system.
27. Figure courtesy discounts.
28. Prepare a bank deposit.
29. Prepare monthly expense sheet.
30. Prepare yearly summary sheet.
31. Prepare record of employees' salaries and tax deductions.
32. Write a check and complete check stub.
33. Reconcile bank statement.
34. Complete petty cash summary.
35. Complete insurance form.

(NOTE: If activities 23 through 35 have not been finished before the test, ask the instructor when they should be completed.)

BUSINESS PROCEDURES
UNIT V

ANSWERS TO TEST

1. a. 13
   - b. 9
   - c. 6
   - d. 4
   - e. 7
   - f. 2
   - g. 11
   - h. 14
   - i. 1
   - j. 10
   - k. 12
   - l. 3
   - m. 5
   - n. 8
   - o. 15
   - p. 16
   - q. 17
   - r. 20
   - s. 22
   - t. 18
   - u. 21
   - v. 19
   - w. 24
   - x. 23

2. Description should include:
   - a. Develop an accurate, routine system of keeping accounts
   - b. Give complete and careful attention to every detail
   - c. Provide accurate account of records and money involved
   - d. Show ethical responsibility when handling confidential information

3. a. Patients pay cash
   - b. Patients are billed monthly
   - c. Bills are sent as soon as patient is discharged
   - d. Patients pay fixed amount weekly or monthly
   - e. Bills are charged on credit cards
   - f. Bills are paid by health insurance

4. a. 3
   b. 1
   c. 2
5. a. Send the usual statement; this account is not yet "overdue"
   b. 60 days
   c. Make the first telephone contact with the responsible person
   d. 90 days
6. b, c, f, g, h, i
7. a. 4
   b. 2
   c. 5
   d. 1
   e. 3
8. a. 4
   b. 2
   c. 1
   d. 5
   e. 3
9. a. Fold-a-log pegboard
   b. Pegboard receipt and charge slip
   c. Daily log of charges and receipts (daily journal page)
   d. Ledger card
10. a. Proof of posting
    b. Accounts receivable control
11. a. 3
    b. 2
    c. 1
    d. 4

12. Description should include:

    a. Endorse backs of checks on left end

    b. Make out deposit slip with correct date, doctor's name, account number, and itemized amount and total to be deposited

13. a, b, c, d, e, f, g

14. a, b, c, d, e, g, h, i, k, m

15. Description should include:

    a. Employer must deposit withheld income tax and Social Security in an authorized commercial bank or Federal Reserve Bank

    b. Internal Revenue Service will send a Federal Tax Deposit Form 501 for reporting needed information

    c. Employer must file a quarterly report on Form 941, even though monthly deposits are made

16. a. Amount of check in figures

    b. Signature of person making payment

    c. Date

    d. Purpose of check

    e. Name of person or firm

    f. To whom check is paid

    g. Amount of check in words

17. a, b, c, e, f, g, j, k, o

18. a. 2

    b. 4

    c. 6

    d. 5

    e. 7

    f. 3

    g. 1

19. Description should include:

    a. Write check from office account for cash needed

    b. Fill out a numbered voucher each time money is taken from fund

    c. Balance amount of voucher and remaining cash to original amount of petty cash when fund is low or depleted

20. a. PR
    b. PU
    c. PR
    d. PU
21. Any six of the following:
    a. Know policies you see most often
    b. Learn benefits that pertain to you
    c. Use a standard form, when possible
    d. Get insurance details during patient's first visit
    e. Tell patient in advance when policy is not going to pay full fee
    f. Find out who will receive money from company
    g. Use standard medical terminology
    h. Get claims in as quickly as possible
    i. Follow up unpaid claims
    j. Make rules for special situations
    k. Use telephone to call company representative if you have questions
22. b, d, e, g, h, j, k, m
23. Evaluated to the satisfaction of the instructor
24. Evaluated to the satisfaction of the instructor
25. Evaluated to the satisfaction of the instructor
26. Evaluated to the satisfaction of the instructor
27. Evaluated to the satisfaction of the instructor
28. Evaluated to the satisfaction of the instructor
29. Evaluated to the satisfaction of the instructor
30. Evaluated to the satisfaction of the instructor
31. Evaluated to the satisfaction of the instructor
32. Evaluated to the satisfaction of the instructor
33. Evaluated to the satisfaction of the instructor
34. Evaluated to the satisfaction of the instructor
35. Evaluated to the satisfaction of the instructor

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of basic skills needed by the medical assistant to assist the physician and give quality care to patients. The student should also be able to collect patient data and take vital signs. This knowledge will be evidenced through completion of assignment sheets, job sheets, and the unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with basic medical assistant skills to the correct definitions.
2. Select from a list responsibilities of the medical assistant when a patient comes to the office.
3. Identify basic instruments used in a routine or preliminary exam.
4. Name areas where temperature may be taken.
5. Match temperature ranges to the correct terms.
6. Name factors which influence body temperature.
7. Identify sites where pulse may be taken.
8. Match ranges of average pulse rates to specific groups.
9. Select from a list factors that influence heart rate and pulse rate.
10. Select from a list factors affecting respiration.
11. Match terms used to describe respiration to the correct definitions.
12. Name factors affecting blood pressure.
13. Match types of blood pressure measurements to the correct definitions.
14. Describe sites where blood pressure may be taken.
15. Collect patient data.
16. Read Fahrenheit thermometer.
17. Read Celsius thermometer.
18. Convert Fahrenheit and Celsius thermometer readings.

19. Demonstrate the ability to:

    a. Take height and weight (adult and infant).

    b. Take temperatures.

    c. Take pulse and respirations.

    d. Take blood pressure.

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

SUGGESTED ACTIVITIES

I. Suggested activities for the instructor:

   A. Provide students with objective sheet.

   B. Provide students with information, assignment, and job sheets.

   C. Discuss unit and specific objectives.

   D. Discuss information and assignment sheets.

   E. Invite a medical assistant to speak and demonstrate to class techniques used to provide quality care for patients in a medical office.

   (NOTE: Stress human relations and the need for the MA to use *TLC--tender loving care*.)

   F. Provide equipment to complete job sheets.

   G. Set up roleplaying situations where students can practice collecting patient data with classmates or other faculty.

   H. Obtain patient information forms used in the medical offices where students will be training so that they will become familiar with forms being used.

   I. Demonstrate and discuss procedures outlined in job sheets.

   J. Provide equipment and allow time for practice and return demonstrations.

   K. Set up a vital-signs-taking clinic and allow students to take TPR's and B/P of other faculty and students.

   (NOTE: This could be used as a HOSA project.)

   L. Volunteer to assist with taking vital signs at the local Bloodmobile.

   M. Demonstrate your students' skills by having them take blood pressures at your school's open house or during National Vocational Week.

   N. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

C. Assignment sheets

  1. Assignment Sheet #1--Collect Patient Data
  2. Assignment Sheet #2--Read Fahrenheit Thermometer
  3. Assignment Sheet #3--Read Celsius Thermometer
  4. Assignment Sheet #4--Convert Fahrenheit and Celsius Thermometer Readings

D. Answers to assignment sheets

E. Job sheets

  1. Job Sheet #1--Take Height and Weight (Adult and Infant)
  2. Job Sheet #2--Take Temperatures
  3. Job Sheet #3--Take Pulse and Respirations
  4. Job Sheet #4--Take Blood Pressure

F. Test

G. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

C. Clayton, Thomas L., M.D., ed. *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

IV. Filmstrips:

A. "Temperature, Pulse, and Respiration." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

B. "Blood Pressure." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

V. Film--"Blood Pressure Readings." Color, 10 minutes, Oklahoma State Department of Health. Available from Oklahoma State Department of Health, N.E. 10th Street and Stonewall, Oklahoma City, Oklahoma 73105.

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

INFORMATION SHEET

I. Terms and definitions

A. Apical pulse--Heart rate counted at the apex of the heart by using a stethoscope

B. Arrhythmia--Uneven intervals between pulses or heartbeats

C. Auscultation--Use of the ears, either with or without the assistance of special instruments, to hear heartbeat, respirations, or other sounds made by the body

D. Blood pressure--Force blood exerts against vessel wall as heart beats

E. Body temperature--Balance between heat produced and heat lost by the body

F. Bradycardia--Abnormally slow heart rate

G. Febrile--Feverish; pertaining to a fever

H. Hypertension--High blood pressure

I. Hypotension--Low blood pressure

J. Hypothermia--Temperature below normal body temperature

K. Inspection--Observing by sight with or without the assistance of special instruments

L. Palpation--Examining, by using hands, to feel the outline of the body to determine any disease of organs that has caused them to change shape

M. Percussion--Tapping the body, lightly with the hand, to determine size, position, and consistency of a structure in the body

(NOTE: The percussion hammer is an instrument used to check reflexes.)

N. Pulse--Heartbeat as felt through artery walls

O. Pulse deficit--Difference between pulse counts taken simultaneously at two sites, usually radial and apical pulses

P. Radial pulse--Heart rate, counted by feeling with the fingertips, throbbing against the radial artery

Q. Quality--Volume and strength of pulse beats

R. Rate--Number of pulses, heartbeats, or respirations per minute

INFORMATION SHEET

S. Respiration--Exchange of oxygen and carbon dioxide in the body

T. Rhythm--Regularity or irregularity of pulses, heartbeats, or respirations

U. Sphygmomanometer--Instrument used to measure blood pressure

V. Stethoscope--Instrument used to listen to sounds produced by heart, lungs, and other internal organs

W. Tachycardia--Abnormally rapid heart rate

II. Responsibilities of the medical assistant when a patient comes to the office (Assignment Sheet #1)

A. Check to see which patient, what time, and type of appointment has been scheduled

(NOTE: This information will be used in determining the treatment or exam room to use, the type of instruments to have ready, how much time to allow, and how much assistance the physician will need. In some offices laboratory work or X-ray exams may be done prior to appointment.)

B. Prepare treatment or exam room by having it clean and ready with linens and equipment

C. Pick up chart and read through the information to refresh your memory concerning patient and his or her case

D. Call patient by name and indicate that he or she is to follow you

(NOTE: Make sure you identify the correct patient, calling the name and repeating it with the correct pronunciation when the patient comes to you.)

E. Introduce yourself if this is the first time the patient has been in the office or if you are not sure the patient remembers you

(NOTE: Some offices are very professional and would like for you to use Miss, Mrs., or Mr. in front of your name, others are very informal and would like for you to use your first name.)

F. Weigh patient and get height if needed

(NOTE: In some offices patients are weighed each time they come in, but in some they are weighed only if physician requests it.)

G. Escort patient to examination room

H. Assist patient in undressing as much as is needed, depending on type of appointment or what physician will need

INFORMATION SHEET

I. Provide privacy if patient is dressed only in a gown or sheet

J. Take vital signs

K. Use questioning techniques to obtain patient information that physician will need to know before examination takes place

L. Assist physician during exam

(NOTE: If lab work or X-rays are to be done, escort patient to area and then back to exam room.)

M. Make patient comfortable during exam

(NOTE: Many patients are very nervous and uncomfortable during exams and treatments. Convey to them that you are there for their benefit and that you really care how they feel.)

N. Assist patient to dress after exam or treatment

O. Make sure patient understands any instructions that physician has given

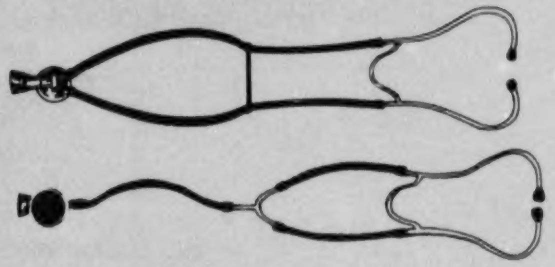
P. Escort patient back to waiting room or business office

Q. Clean room and replace linens or instruments that will be used for the next patient

III. Basic instruments used in a routine or preliminary exam

(NOTE: These instruments are the basic equipment that may be used in any office of medicine. Depending on the physician and his or her preference other equipment may be desired. Become familiar with all equipment used in your office and learn to use and care for it.)

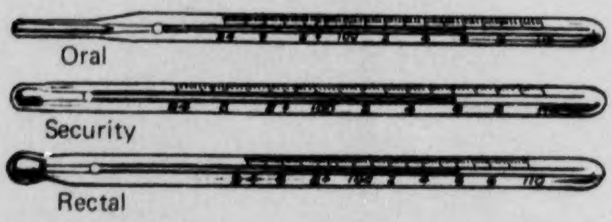
A. Stethoscope



(NOTE: There are other types of stethoscopes available. An obstetrician may use a type of electronic monitor to pick up fetal heart tones.)

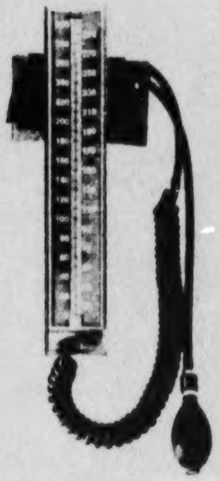
INFORMATION SHEET

B. Thermometers


Oral
Security
Rectal

C. Sphygmomanometers

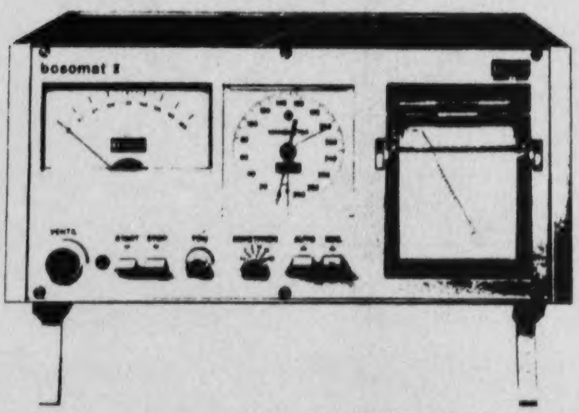
Aneroid



Mercury

Used with permission of Sybron Corporation, Medical Products Division, Rochester, New York.

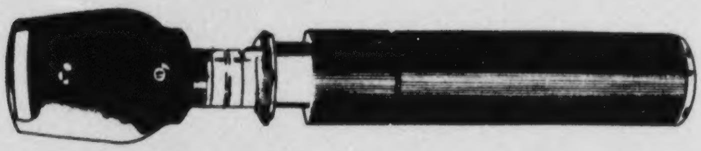
Electronic



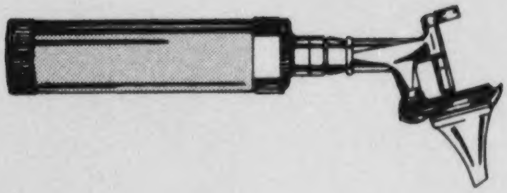
Used with permission of Propper Manufacturing Company.

INFORMATION SHEET

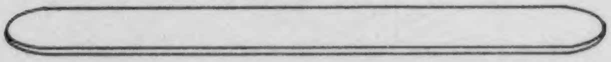
D. Ophthalmoscope



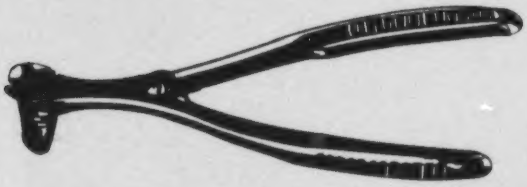
E. Otoscope



F. Tongue blade or depressor

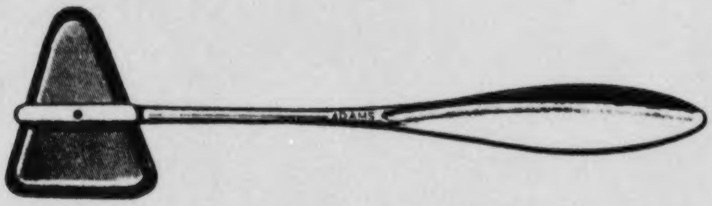


G. Nasal speculum



INFORMATION SHEET

H. Percussion hammer



IV. Areas where temperature may be taken

   A. Oral cavity under tongue

   B. Rectal

   (NOTE: This method is usually used for children under six years of age or older adults who may have difficulty holding the thermometer in their mouths.)

   C. Axillary

   (NOTE: This method is the least accurate and will not be used routinely in a medical office.)

V. Body temperature ranges (Assignment Sheets #2, #3, and #4)

   A. Normal oral--36.4°C to 37.2°C (97.6°F to 99°F)

   B. Normal rectal--37.5°C (99.6°F)

   C. Normal axillary--36.4°C (97.6°F)

   D. Subnormal (oral)--Below 36.2°C (97°F)

   E. Moderate fever (oral)--37.7°C to 39.4°C (100°F to 103°F)

   F. High fever (oral)--39.4°C to 40.5°C (103°F to 105°F)

   (NOTE: Rectal temperatures average one degree higher than oral temperatures; axillary temperatures average one degree lower than oral.)

VI. Factors which influence body temperature

   A. External environment

   Examples: Room temperature, ventilation, amount of clothing, and humidity affect body temperature

INFORMATION SHEET

B. Internal environment

(NOTE: Body temperature is affected by such things as amount of adipose tissue, illness, and fluid and electrolyte balance.)

C. Sex

(NOTE: Women usually have a higher temperature than men. Also, during pregnancy, women have a temperature almost a degree higher than the normal.)

D. Age

(NOTE: In infants and young children, the heat-regulating mechanism is not fully developed; in the aged, the heat-regulating mechanism becomes less efficient.)

E. Strong emotions

(NOTE: Excitement, anxiety, nervousness, and other emotions cause increased activity of the secreting glands which increases heat production.)

F. Time of day

(NOTE: Body temperature is usually highest in mid-afternoon and lowest during the night.)

G. Exercise and digestive processes

(NOTE: Increased activity elevates body temperature.)

H. Infection or disease

(NOTE: Infection and disease processes may increase or decrease body temperature.)

I. Hot or cold foods

(NOTE: Hot or cold foods taken within fifteen to thirty minutes prior to taking an oral temperature will cause an inaccurate reading.)

J. Mouth breathing

(NOTE: The dry cooled mouth of a mouth-breathing person will not register an accurate temperature.)

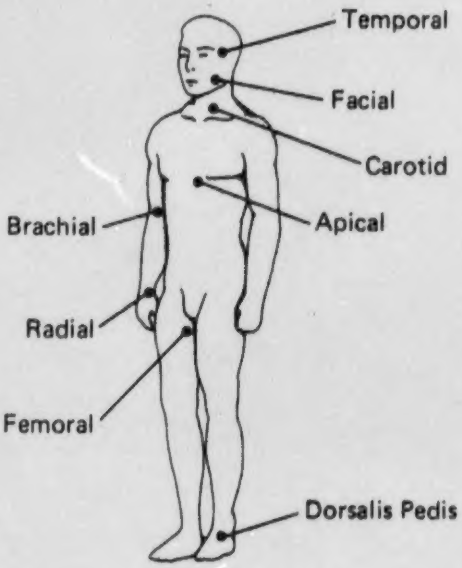
K. Smoking

(NOTE: Smoking prior to an oral temperature taking will give an inaccurate reading.)

INFORMATION SHEET

VII. Sites where pulse may be taken

- A. Brachial
- B. Radial
- C. Femoral
- D. Temporal
- E. Facial
- F. Carotid
- G. Apical
- H. Dorsalis pedis


Temporal
Facial
Carotid
Apical
Brachial
Radial
Femoral
Dorsalis Pedis

VIII. Ranges of average pulse rates for specific groups

- A. Men--60 to 70 beats per minute
- B. Women--65 to 80 beats per minute
- C. Children over age seven--72 to 90 beats per minute
- D. Children age one to seven--80 to 120 beats per minute
- E. Infants--110 to 130 beats per minute
- F. Fetal heart rate--120 to 160 beats per minute

IX. Factors that influence heart rate and pulse rate

- A. Activity
- B. Emotions
- C. Some drugs

  (NOTE: Caffeine increases and digitalis decreases heart rate.)
- D. Smoking

INFORMATION SHEET

E. Endocrine disturbances

(NOTE: Hyperthyroidism and hypothyroidism influence heart rate.)

F. Elevated temperature

(NOTE: Heart rate usually increases proportionately as temperature increases.)

G. Disorders of the heart and circulatory system

X. Factors affecting respiration

A. Age

(NOTE: Respiration rate for newborns may be forty per minute while the normal adult rate is fourteen to eighteen per minute.)

B. Sex

(NOTE: Respiration rate is usually faster in women.)

C. Exercise

D. Pain

E. Fever

F. Emotions

G. Heart disease

H. Respiratory disease

I. Drugs

XI. Terms used to describe respiration

A. Eupnea--Normal breathing

B. Dyspnea--Difficult or labored breathing

C. Apnea--Temporary cessation of breathing

D. Orthopnea--Breathing possible only when person sits or stands in an erect position

E. Cheyne-Stokes--Uneven respirations from strong to weak with intervals of apnea

INFORMATION SHEET

F. Rales--Bubbling or rattling sounds caused by mucus in the air passages as in bronchitis or pneumonia

G. Costal--Breathing accomplished chiefly by rib muscles

XII. Factors affecting blood pressure

A. Condition of the artery and arteriole walls

(NOTE: Blood pressure usually increases with age.)

B. Rate of heartbeat

C. Exercise

D. Emotions

E. Sex

(NOTE: Blood pressure is usually higher in women.)

F. Hemorrhage

G. Shock

H. Drugs

I. Endocrine activity

J. Altitude

K. Smoking

L. Site where taken

XIII. Types of blood pressure measurement

A. Systolic pressure--Pressure at its peak during the contraction of the heart

B. Diastolic pressure--Pressure at its lowest when heart is relaxed

C. Pulse pressure--Difference between systolic and diastolic pressure

(NOTE: Normal values for the young adult are: systolic, 120 mm Hg; diastolic, 80mm Hg; and pulse pressure, approximately 40mm Hg. Pulse pressure more than 50 or less than 30mm Hg is considered abnormal.)

INFORMATION SHEET

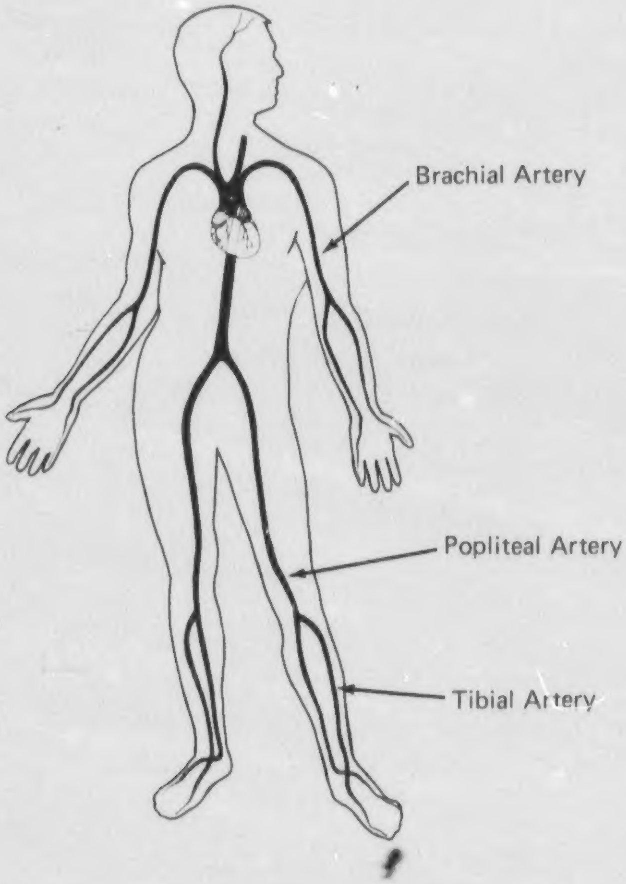
XIV. Sites where blood pressure may be taken

A. Over brachial artery on the inner surface of the elbow

B. In the popliteal space with cuff applied above knee

C. In lower leg over the tibial artery with cuff applied below knee

(NOTE: When blood pressure is not taken in the arm, the site should be recorded on patient's chart.)


Brachial Artery
Popliteal Artery
Tibial Artery

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

ASSIGNMENT SHEET #1--COLLECT PATIENT DATA

NAME ____________________ SCORE __________

In many offices the MA is responsible for collecting information that will be used in the accumulative patient chart. The assistant should be familiar with the forms used in that particular office and become comfortable in questioning patients concerning their medical problems. Below is a sample form using a case study and appropriate questions to ask to collect pertinent data. Use the charts on the following pages or ones provided by your instructor, and case studies to roleplay with a classmate collecting patient data.

SAMPLE CASE STUDY--Mrs. Jefferies has a complaint of headache, fever, and congestion of chest.

98479
Case NO.

Mrs. Georgia Jefferies
Patient Name

Today's date
Date

1. Take vital signs (repeat any you feel might need to be verified).

   TEMP. 101^6

   PULSE 88

   RESP. 14

   B/P 130/80

2. PRESENT ILLNESS ____________________

   Ask if this is the first time they have had this condition and how long have they had the symptoms.

   (NOTE: A good key question to ask is, "You felt good until when?")

3. CHIEF COMPLAINTS ____________________

   Questions you might ask: Where is your headache located?
   Is it constant or intermittent?
   Sharp or dull?
   How long have you been running an elevated temperature?
   What has it been running, low grade or considerably elevated?
   Have you been coughing?
   Is it a productive or nonproductive cough?
   How did this illness begin?
   Are there any other symptoms?

ASSIGNMENT SHEET #1

4. MEDICATIONS____

Questions you might ask:

What medications have you been taking for this illness?
What medications do you take regularly?

5. ALLERGIES____

Do you have any drug or food allergies?

ASSIGNMENT SHEET #1

CASE STUDY #1--Jim Banks has come in with a pain in the abdomen, nausea, and vomiting.

Vital signs: T. 99.8°F, P. 92, R. 32, B/P 150/86

CASE NO. ________ Patient Name ________

Date ________

1. VITAL SIGNS

TEMP. ________

PULSE ________

RESP. ________

B/P ________

2. PRESENT ILLNESS ________

Questions: ________

3. CHIEF COMPLAINTS ________

Questions: ________

ASSIGNMENT SHEET #1

4. MEDICATIONS____________________

Questions:____________________

____

____

____

____

5. ALLERGIES____________________

Questions:____________________

____

____

____

____

ASSIGNMENT SHEET #1

CASE STUDY #2--Jeri Cross has come in with a lump under her right arm, and has had chest pain recently.

Vital signs: T. 98.8°F, P. 84, R. 18, B/P 120/76

CASE NO. ____________ Patient Name ____________

Date ____________

1. VITAL SIGNS

   TEMP.__________

   PULSE__________

   RESP.__________

   B/P__________

2. PRESENT ILLNESS__________

   Questions: __________

3. CHIEF COMPLAINTS__________

   Questions: __________

ASSIGNMENT SHEET #1

4. MEDICATIONS ______________________________

Questions: ______________________________

____

____

____

____

5. ALLERGIES ______________________________

Questions: ______________________________

____

____

____

____

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

ASSIGNMENT SHEET #2--READ FAHRENHEIT THERMOMETER

NAME______________________________________ SCORE________________

The clinical thermometer measures body temperature to the nearest two-tenths of a degree.

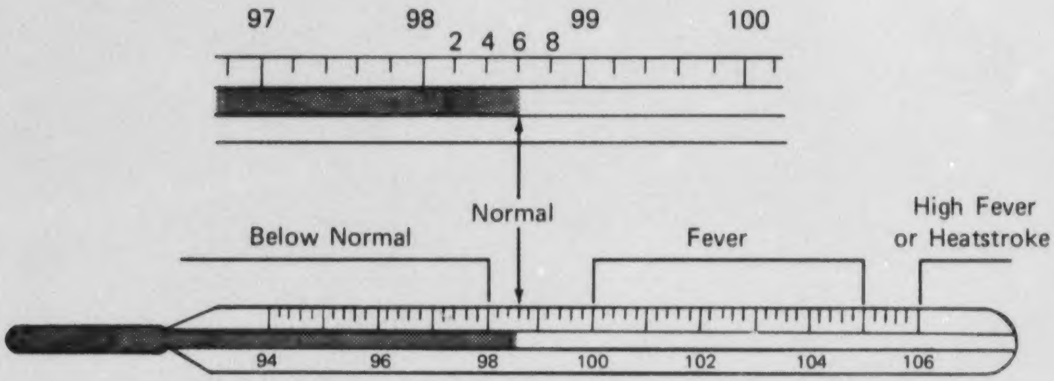
PART I

Procedure for reading Fahrenheit thermometers:

1. Hold thermometer at eye level. Rotate thermometer until you can clearly see column of mercury.

2. Observe markings, called *calibrations*, on the scale which is at upper side of the column of mercury. Remember that each of the long lines represents a full degree and the four short lines represent 2/10 (0.2) of a degree. Only even-numbered degrees are named on a Fahrenheit clinical thermometer, that is 96°, 98°, 100°, and so on.

   Example:

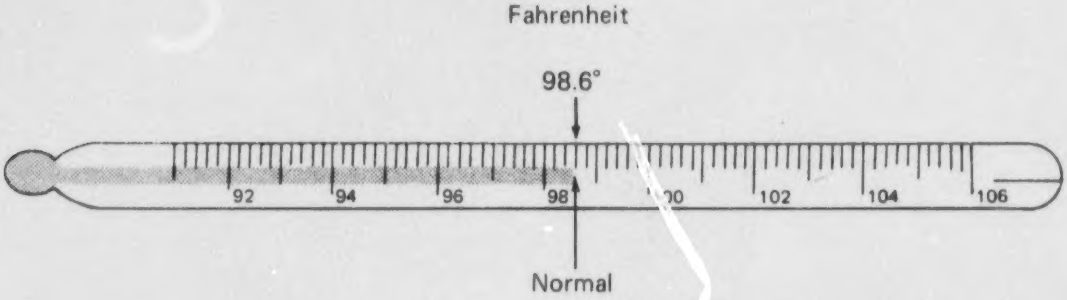

97
98
99
100
2 4 6 8
Normal
Below Normal
Fever
High Fever or Heatstroke
94
96
98
100
102
104
106

ASSIGNMENT SHEET #2

3. If mercury column ends at one of the short lines, look to see which long line is immediately left. That will tell you the degree of temperature, for example 98°F mark, the temperature is 98.6°F.

   (NOTE: Temperature may also be written 98^6.)

   Example:

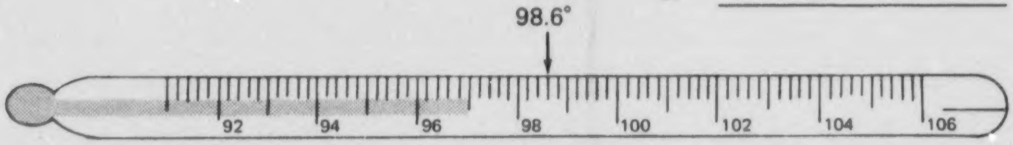

Fahrenheit
98.6°
92
94
96
98
100
102
104
106
Normal

ASSIGNMENT SHEET #2

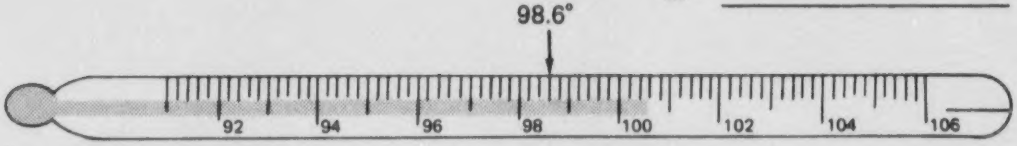
PART II

1. Write these thermometer readings in the blanks to the right.

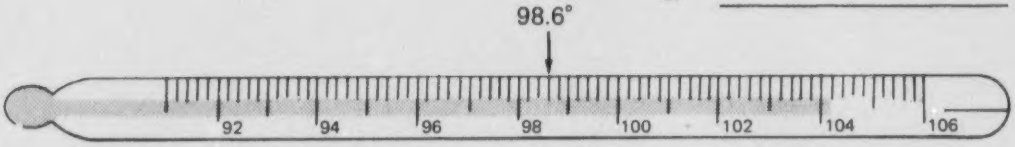
a. ____________________


98.6°
92
94
96
98
100
102
104
106

b. ____________________

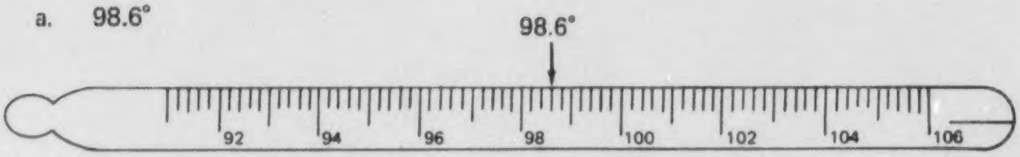

98.6°
92
94
96
98
100
102
104
106

c. ____________________

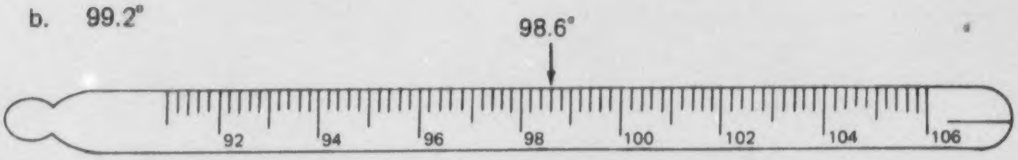

98.6°
92
94
96
98
100
102
104
106

2. Mark the temperature readings on each of the following thermometers.

a. 98.6°

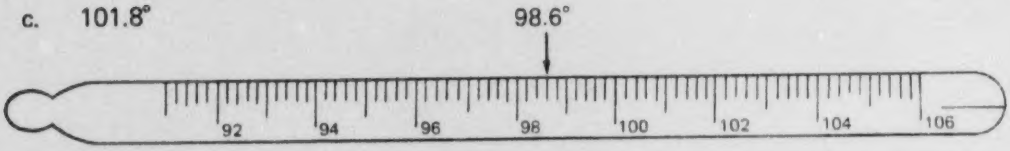

98.6°
92
94
96
98
100
102
104
106

b. 99.2°

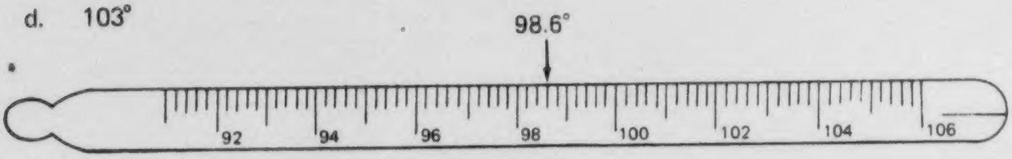

98.6°
92
94
96
98
100
102
104
106

ASSIGNMENT SHEET #2

c. 101.8°


98.6°
92
94
96
98
100
102
104
106

d. 103°


98.6°
92
94
96
98
100
102
104
106

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

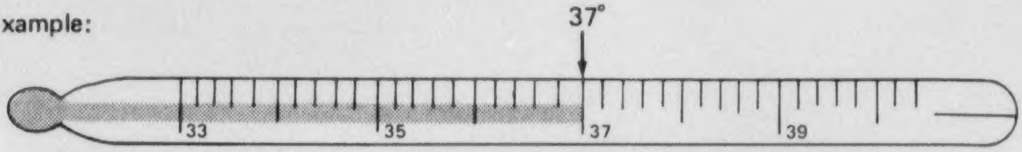
ASSIGNMENT SHEET #3--READ CELSIUS THERMOMETER

NAME ______________________________ SCORE ____________________

Observe calibrations on the Celsius thermometer. Remember that each of the long lines represents a full degree and each short line represents .2 (2/10) of a degree. Only odd numbered degrees are indicated by number on the Celsius clinical thermometer.

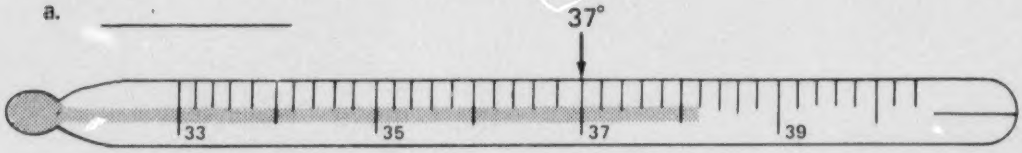
(NOTE: The average normal temperature is 37°C.)

Example:

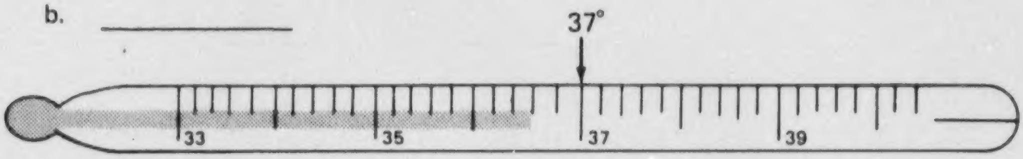


1. Write the temperature readings of each of the following thermometers in the blanks provided.

   a. ____________

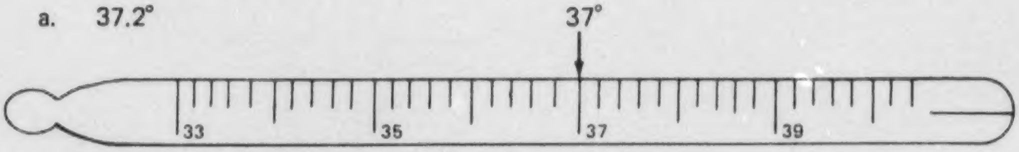


   b. ____________



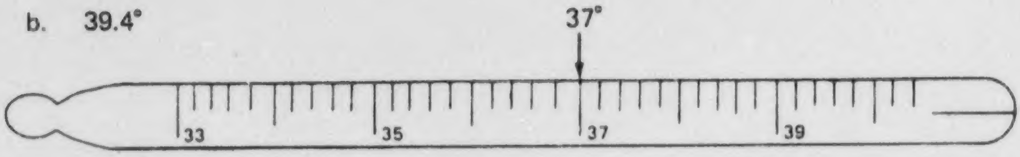
2. Mark the temperature readings on the following thermometers.

   a. 37.2°

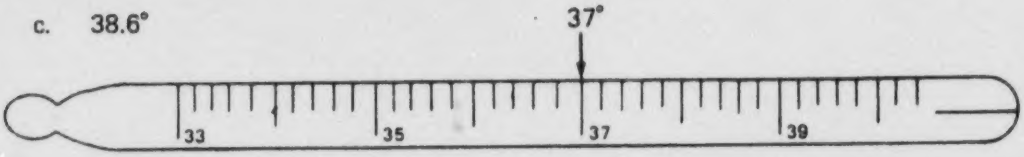


ASSIGNMENT SHEET #3

b. 39.4°


37°
33
35
37
39

c. 38.6°


37°
33
35
37
39

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

ASSIGNMENT SHEET #4--CONVERT FAHRENHEIT AND CELSIUS THERMOMETER READINGS

NAME________________________________ SCORE______________

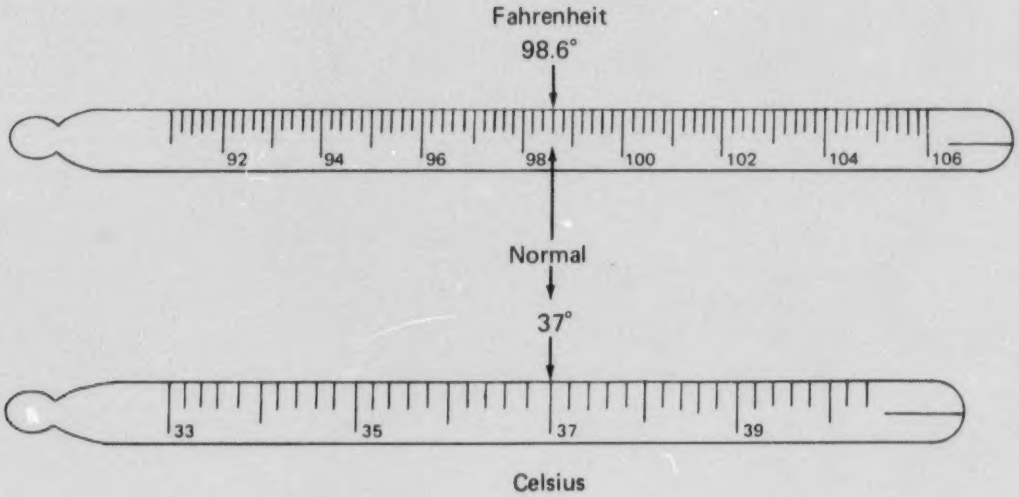
One thermometer is marked with either of two scales of measurement, Fahrenheit (F) or Celsius (C). Fahrenheit is more commonly used today but the use of Celsius thermometers is becoming more widespread.

PART I

1. In order to convert Fahrenheit readings to Celsius, subtract 32 from the reading and multiply by 5/9; thus, $C°=5/9\ (F°-32)$.

2. To convert Celsius to Farenheit, multiply the Celsius reading by 9/5 and add 32; thus, $F°=(C° \times 9/5)+32$.

   Example:



PART II

Solve the following problems:

1. 99.2°F = ______°C
2. 102°F = ______°C
3. 97°F = ______°C
4. 39.4°C = ______°F
5. 38°C = ______°F
6. 37°C = ______°F

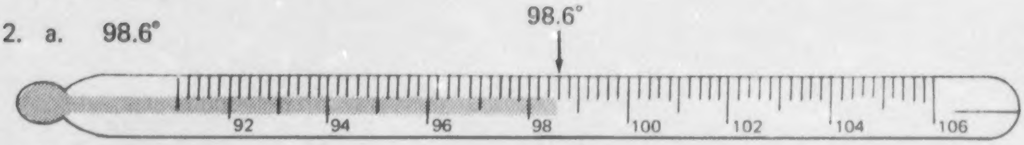
BASIC MEDICAL ASSISTANT SKILLS
UNIT I

ANSWERS TO ASSIGNMENT SHEETS

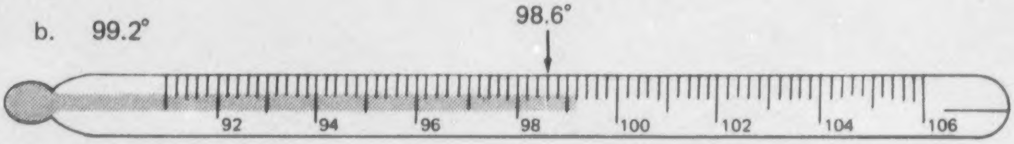
Assignment Sheet #1–Evaluated to the satisfaction of the instructor

Assignment Sheet #2

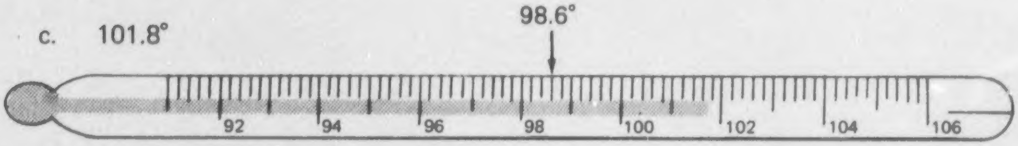
1. a. 97°F
   b. 100.6°F
   c. 104.2°F
2. a. 98.6°


98.6°
92
94
96
98
100
102
104
106

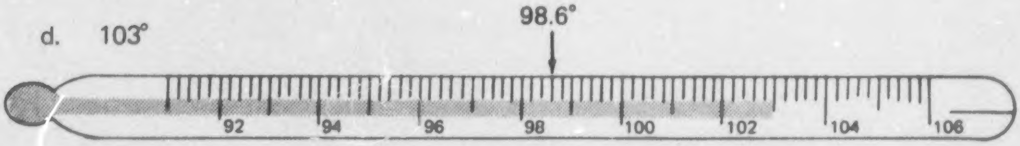
   b. 99.2°


98.6°
92
94
96
98
100
102
104
106

   c. 101.8°

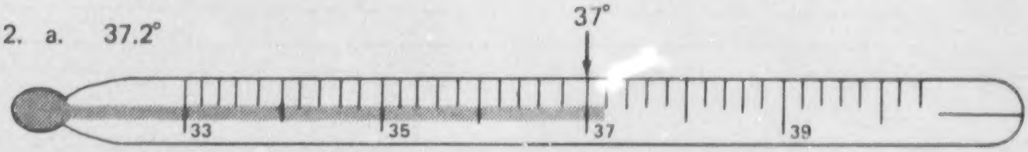

98.6°
92
94
96
98
100
102
104
106

   d. 103°

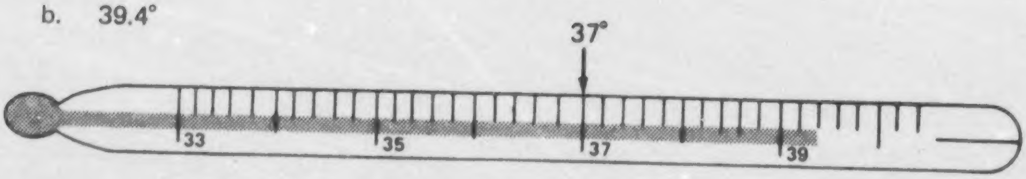

98.6°
92
94
96
98
100
102
104
106

Assignment Sheet #3

1. a. 38.2°C
   b. 36.6°C
2. a. 37.2°


37°
33
35
37
39

b. 39.4°


37°
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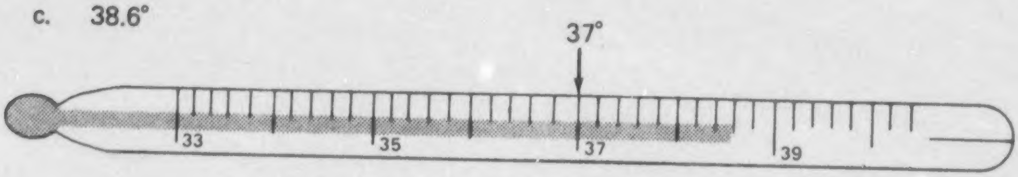
c. 38.6°


37°
33
35
37
39

Assignment Sheet #4

1. 37.4°C
2. 39°C
3. 36°C
4. 103°F
5. 100.4°F
6. 98.6°F

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

JOB SHEET #1--TAKE HEIGHT AND WEIGHT (ADULT AND INFANT)

I. Equipment

A. Scales

(NOTE: There are a variety of scales available. Learn to use the scales in your office so that you will be assured of accuracy.)

B. Measuring device

(NOTE: On most standard scales there is a device fastened to the scale to measure height. Infants are usually measured with a tape.)

C. Chart or paper

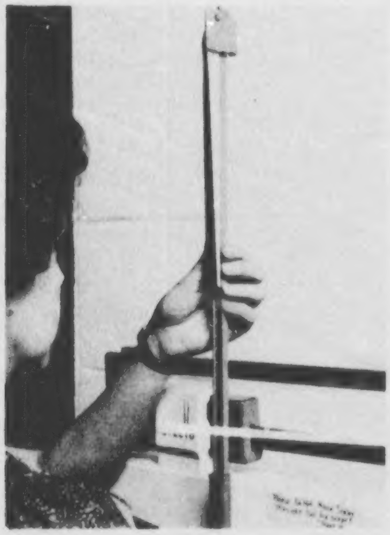
II. Procedure for taking height (adult)

A. Instruct patient to stand on scales

(NOTE: Height will be more accurate if shoes are removed.)

B. Move the measuring device up (Figure 1)

FIGURE 1



C. Instruct the patient to stand as straight as possible

D. Move the measuring device to the top of the patient's head

E. Write the number seen on the measuring device on the proper form

(NOTE: Height will be written in inches.)

JOB SHEET #1

III. Procedure for taking height (infant)

A. Lay infant on table, making sure that you hold securely

B. Use tape to measure infant from the top of the head to the feet (Figure 2)

(NOTE: Make sure the child is lying flat; this will take some skill, as an infant is very active, and it may be difficult for you to keep him/her in this position for any length of time.)

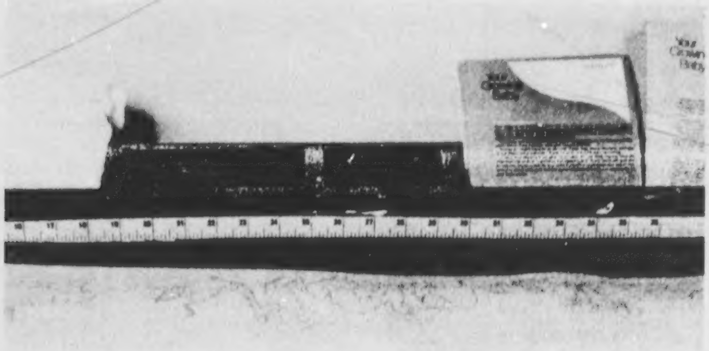


FIGURE 2

C. Write this number on the proper form

IV. Procedure for taking weight (adult)

A. Balance scales

B. Weigh patient each time with approximately the same amount of clothes on, or in a gown, depending on policy in your office

C. Move the slide for the number of pounds to an approximate number to the right (Figure 3)

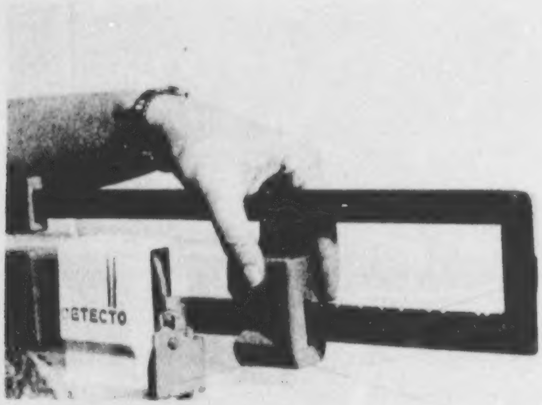
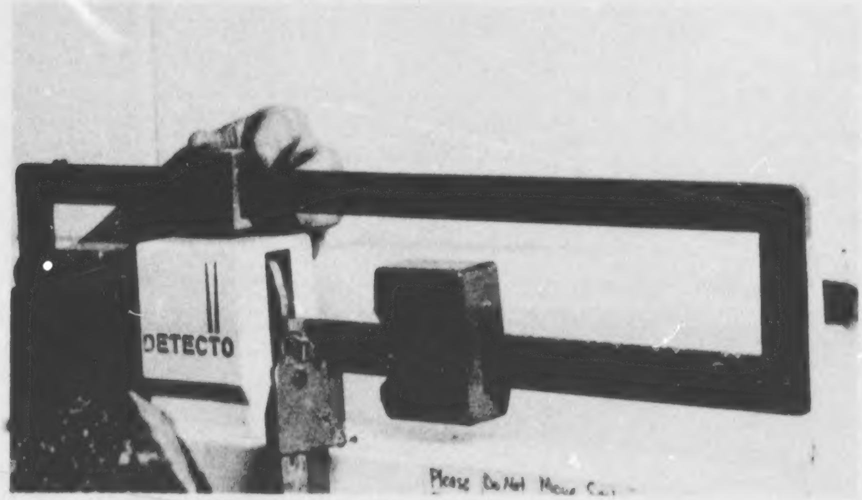


FIGURE 3

JOB SHEET #1

D. Move the slide for the number of ounces to the right (Figure 4)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Please Do Not Move Sca

FIGURE 4

E. Adjust the scale slides until you can see that they are balancing (Figure 5)

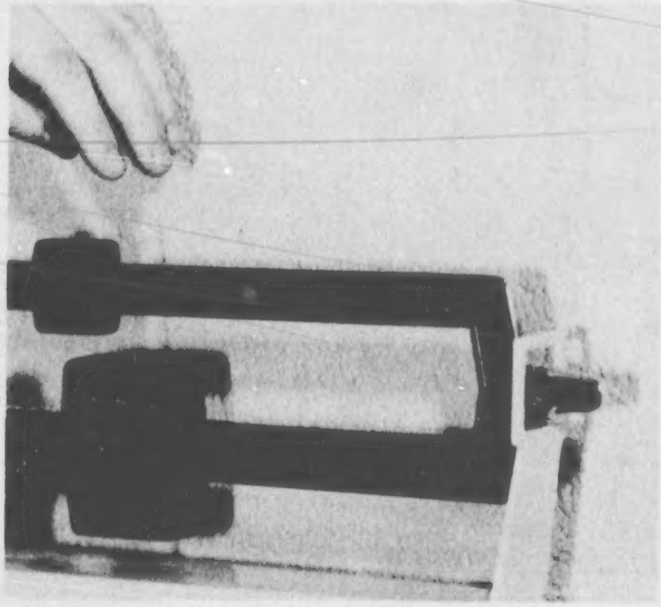


FIGURE 5

F. Write that number on the proper form

JOB SHEET #1

V. Procedure for taking weight (infant)

A. Balance scales (Figure 6)

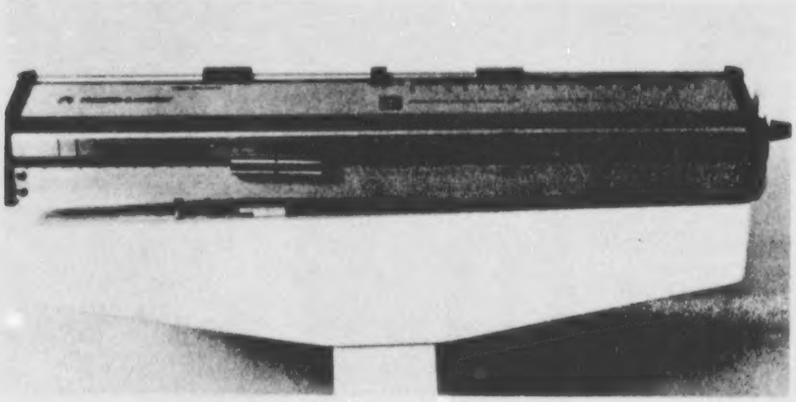
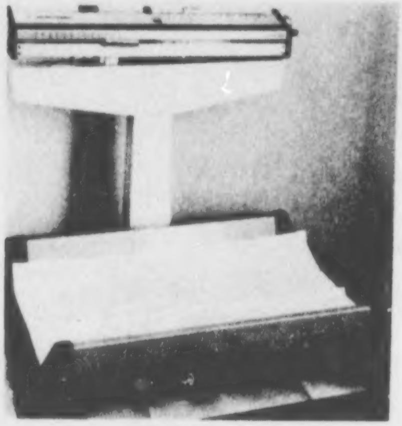


FIGURE 6

B. Take all clothing, except diaper, off of child

C. Place disposable pad on infant scale (Figure 7)

FIGURE 7



D. Hold child securely and place on scale

E. Move slides along until you can see that scale is balancing

(NOTE: Try to move quickly as infant will be moving actively. Be sure not to press on scale, as this will make reading inaccurate.)

F. Write that number on the proper form

(NOTE: Usually at the age of 20 months, or if the child can stand alone, the adult scale can be used.)

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

JOB SHEET #2--TAKE TEMPERATURES

I. Equipment

A. Mercury-type thermometer or electronic thermometer with plastic sheath holder (Figure 1)

(NOTE: Select the type of thermometer needed after deciding at what site temperature will be taken, oral, axillary or rectal.)

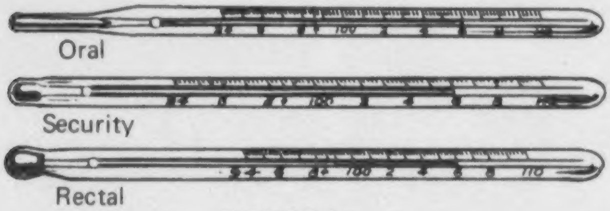


FIGURE 1

B. Clean tissue

C. Lubricant, if temperature is taken rectally

D. Watch with second hand

E. Paper and pen (chart form, if available)

II. Procedure for an oral temperature

A. Wash hands

B. Assemble equipment

C. Identify patient and explain procedure

(NOTE: Do not take temperature if patient has recently taken hot or cold drink or is smoking.)

D. Remove thermometer from container, holding near the end opposite mercury bulb; shake mercury down to 94°F or below

E. Place mercury bulb under patient's tongue; ask patient to keep lips closed without biting thermometer; leave in place for three minutes; take pulse and respirations, if needed, at this time

JOB SHEET #2

F. Remove and wipe thermometer with tissue from stem to bulb and discard tissue

G. Read thermometer and record on paper or chart

H. Recheck temperature if indicated

I. Shake mercury down in thermometer

J. Clean thermometer afterwards using antiseptic appropriate in your office

(NOTE: Clean using a twisting motion starting from the top and working downward.)

K. Replace equipment as needed

L. Wash hands

(NOTE: When using an electronic thermometer follow manufacturer's instructions. See Figure 2.)

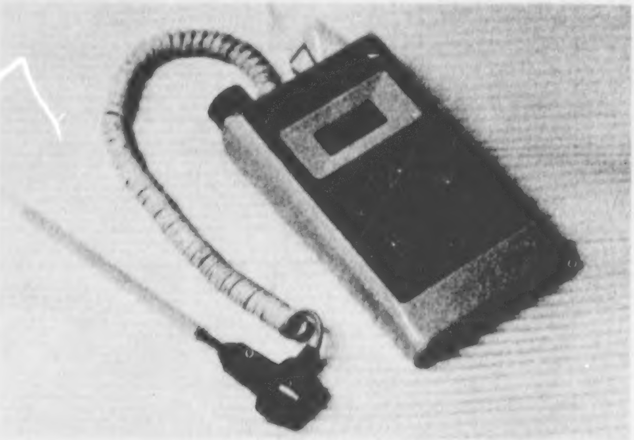


FIGURE 2

III. Procedure for taking rectal temperature

(NOTE: Rectal temperatures will usually be used for children.)

A. Wash hands

B. Assemble equipment

C. Identify patient and explain procedure

D. Provide privacy

JOB SHEET #2

E. Place child on abdomen with face to side unless physical condition makes this inadvisable

(NOTE: For an adult patient, Sims' position would be used, with upper knee flexed.)

F. Expose rectal area

G. Raise upper buttock so anus is clearly seen and insert lubricated bulb gently into rectum about 1/2" to 1" for a child

(NOTE: In adults the thermometer can be inserted about 1 1/2" [3.5cm].)

H. HOLD thermometer in place for three to five minutes

(CAUTION: DO NOT leave patient while rectal temperature is being taken. If patient should move and the thermometer is not being held, it can slip inside or break and injure the rectum or require surgical removal.)

I. Remove thermometer, wipe with clean tissue from stem to bulb, discard tissue

J. Read thermometer

K. Wash hands

L. Record temperature on paper or chart, making sure you indicate that it was taken rectally

M. Cleanse thermometer with same technique as in oral

(NOTE: If electronic thermometer is used follow manufacturer's instructions.)

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

JOB SHEET #3--TAKE PULSE AND RESPIRATIONS

(NOTE: This procedure can be done while you are monitoring patient's temperature.)

I. Equipment

   A. Watch with second hand

   B. Pen and paper or chart

II. Procedure

   A. Wash hands

   B. Assemble equipment

   C. Identify patient and explain procedure

   D. Place patient's arm across chest (Figure 1)

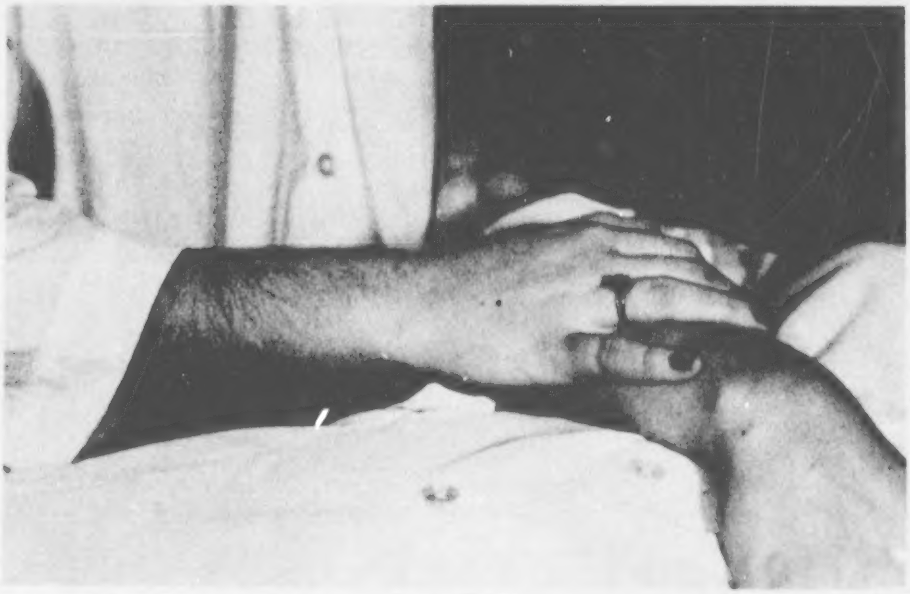


FIGURE 1

E. Place tips of first two fingers over radial artery on thumb side of wrist, exerting slight pressure (Figure 2)

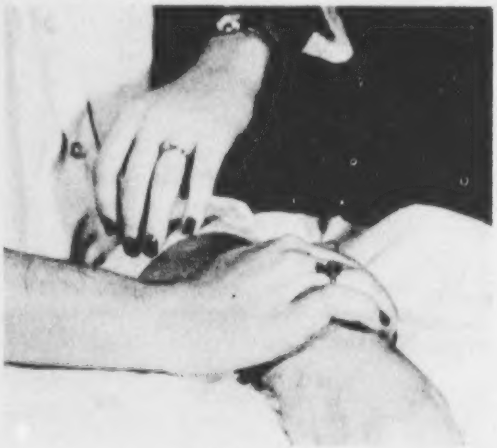


FIGURE 2

(NOTE: Do not use your thumb as it has pulse of its own that will be confusing and pulse rate will be inaccurate.)

F. Count for one minute with second hand of watch when pulse is felt

G. Count respirations after pulse count

(NOTE: While still holding wrist, closely observe patient's respirations, remembering that you must count a full inspiration and expiration to be accurate. It is a good idea to do this without the patient being aware of your observation.)

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

JOB SHEET #4--TAKE BLOOD PRESSURE

I. Equipment needed

A. Sphygmomanometer (Figures 1 and 2)

FIGURE 1

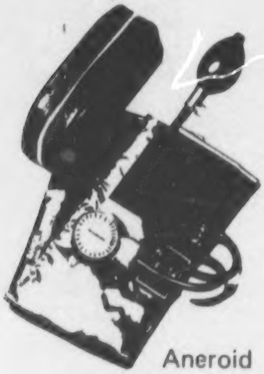
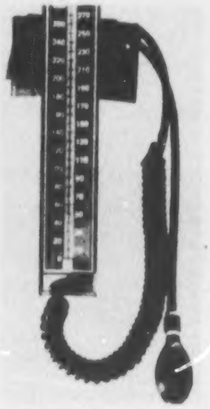


FIGURE 2



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B. Stethoscope

C. Pen, paper or chart

II. Procedure

A. Wash hands

B. Assemble equipment

JOB SHEET #4

C. Identify patient and explain procedure

(NOTE: Patient should by lying down or sitting with arm supported by bed, table, or arm of chair. See Figure 3.)

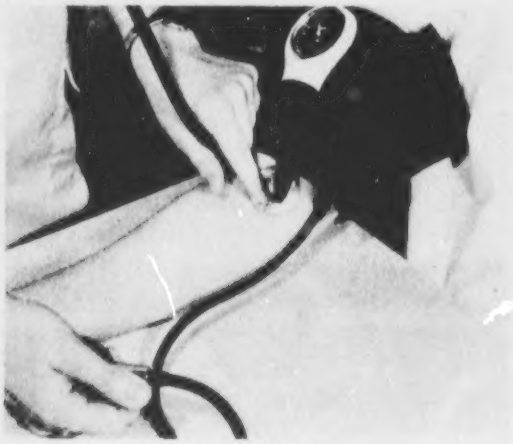


FIGURE 3

D. Apply cuff snugly to arm (preferably the left) above elbow with rubber bladder of cuff over brachial artery

E. Clean ear pieces of stethoscope with alcohol or other antiseptic

F. Place ear pieces of stethoscope in your ears; tighten screw on rubber bulb of sphygmomanometer

G. Locate brachial artery pulse with fingertips and place diaphragm or bell of stethoscope over pulse beat

H. Inflate cuff by squeezing bulb until pulse ceases, then inflate cuff twenty points higher

I. Open valve (thumb screw), slowly releasing air until thumping sound is heard

J. Observe and remember the number where sound is heard; this is the systolic pressure

K. Continue to listen while releasing air gradually from cuff

L. Observe number where sound becomes muffled or dull; this is the diastolic pressure

M. Allow air to escape so pressure falls to zero

JOB SHEET #4

N. Wait one minute with cuff deflated, then repeat the procedures

(NOTE: If using electronic blood pressure indicator, use manufacturer's instructions.)

O. Clean earpieces of stethoscope again with alcohol

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

TEST

NAME______________________________ SCORE______________

1. Match terms associated with basic medical assistant skills to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Heartbeat as felt through artery walls

_____b. Abnormally slow heart rate

_____c. Balance between heat produced and heat lost by the body

_____d. High blood pressure

_____e. Feverish; pertaining to a fever

_____f. Abnormally rapid heart rate

_____g. Force blood exerts against vessel wall as heart beats

_____h. Instrument used to measure blood pressure

_____i. Low blood pressure

_____j. Examining, by using hands, to feel the outline of the body to determine any disease of organs that has caused them to change shape

_____k. Observing by sight with or without the assistance of special instruments

_____l. Uneven intervals between pulses or heartbeats

_____m. Use of the ears, either with or without the assistance of special instruments, to hear heartbeat, respirations, and other sounds made by the body

_____n. Regularity or irregularity of pulses, heartbeats, or respirations

1. Inspection
2. Auscultation
3. Palpation
4. Febrile
5. Hypertension
6. Pulse
7. Body temperature
8. Rhythm
9. Hypotension
10. Arrhythmia
11. Blood pressure
12. Sphygmomanometer
13. Tachycardia
14. Bradycardia

______o. Volume and strength of pulse beats

______p. Instrument used to listen to sounds produced by heart, lungs, and other internal organs

______q. Temperature below normal body temperature

______r. Difference between pulse counts taken simultaneously at two sites, usually radial and apical pulses

______s. Heart rate counted at the apex of the heart by using a stethoscope

______t. Number of pulses, heartbeats, or respirations per minute

______u. Tapping the body, lightly with the hand, to determine size, position, and consistency of a structure in the body

______v. Exchange of oxygen and carbon dioxide in the body

______w. Heart rate, counted by feeling with fingertips, throbbing against the radial artery

15. Respiration
16. Apical pulse
17. Rate
18. Pulse deficit
19. Stethoscope
20. Hypothermia
21. Quality
22. Percussion
23. Radial pulse

2. Select from the following list responsibilities of the medical assistant when a patient comes to the office. Mark each correct answer with an "X."

______a. Pick up chart and read through the information to refresh your memory concerning patient and his or her case

______b. Escort patient to examination room

______c. Take vital signs

______d. Prescribe appropriate medications as condition calls for

______e. Assist physician during exam

______f. Prepare treatment or exam room by having it clean and ready with linens and equipment

______g. Make patient comfortable during exam

______h. Escort patient back to waiting room or business office

______i. Call patient by name and indicate that he or she is to follow you

______j. Refer patient to another physician if condition indicates need ______k. Provide privacy if patient is dressed only in a gown or sheet

______l. Introduce yourself if this is the first time the patient has been in the office or if you are not sure that patient remembers you

______m. Check to see which patient, what time, and type of appointment has been scheduled

3. Identify basic instruments used in a routine or preliminary exam. Write the correct names in the blanks provided.

Stethoscope

Otoscope

Thermometers

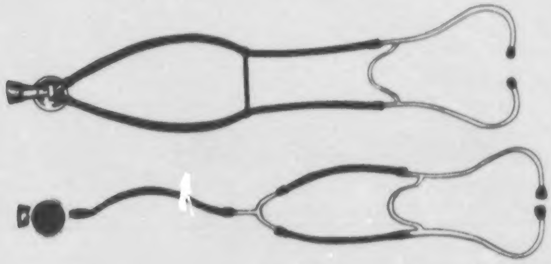
Nasal speculum

Sphygmomanometers

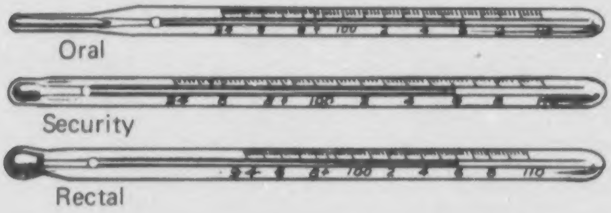
Ophthalmoscope

Tongue blade or depressor

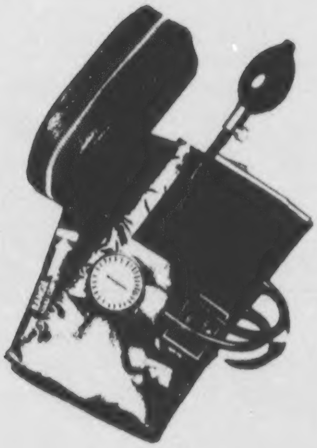
Percussion hammer

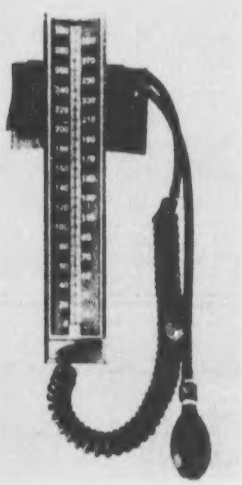


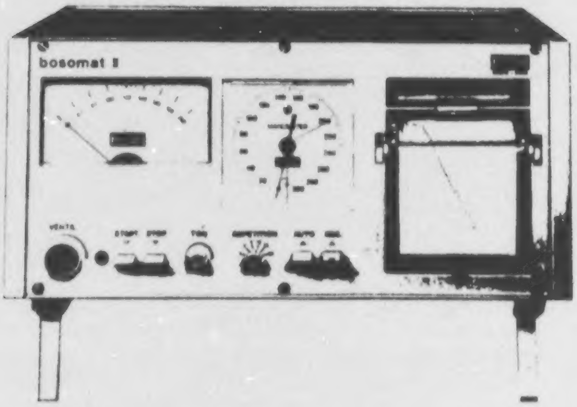
a. ______________________________



b. ______________________________



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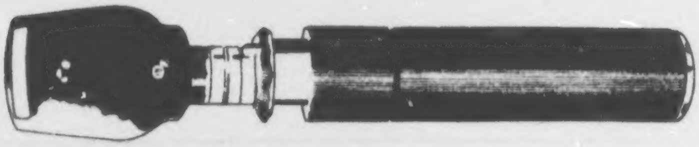
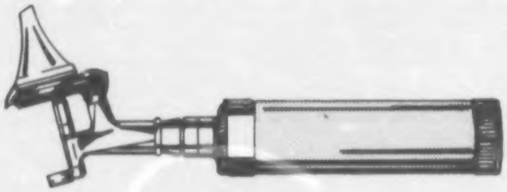
START
STOP

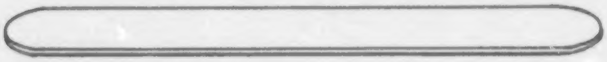
c. ______________________________



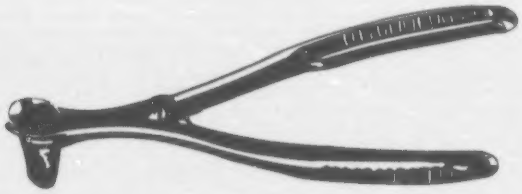
d. ______________________________



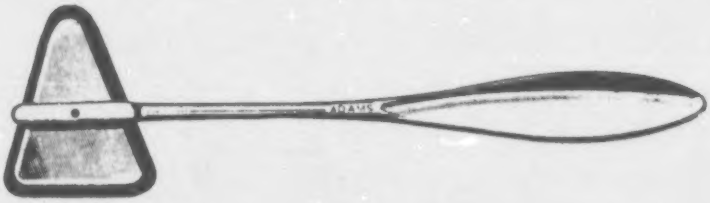
e. ____________________



f. ____________________



g. ____________________



h. ____________________

4. Name the areas where temperature may be taken.

a. ______________________________

b. ______________________________

c. ______________________________

5. Match temperature ranges to the correct terms. Place the correct numbers in the blanks provided.

_____a. 36.4°C to 37.2°C (97.6°F to 99°F)

_____b. 37.5°C (99.6°F)

_____c. 36.4°C (97.6°F)

_____d. Below 36.2°C (97°F)

_____e. 37.7°C to 39.4°C (100°F to 103°F)

_____f. 39.4°C to 40.5°C (103°F to 105°F)

1. Subnormal (oral)
2. High fever (oral)
3. Normal rectal
4. Moderate fever (oral)
5. Normal oral
6. Normal axillary

6. Name six factors which influence body temperature.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

f. ______________________________

7. Identify sites where pulse may be taken. Write the correct names in the blanks provided.

Dorsalis Pedis

Brachial

Facial

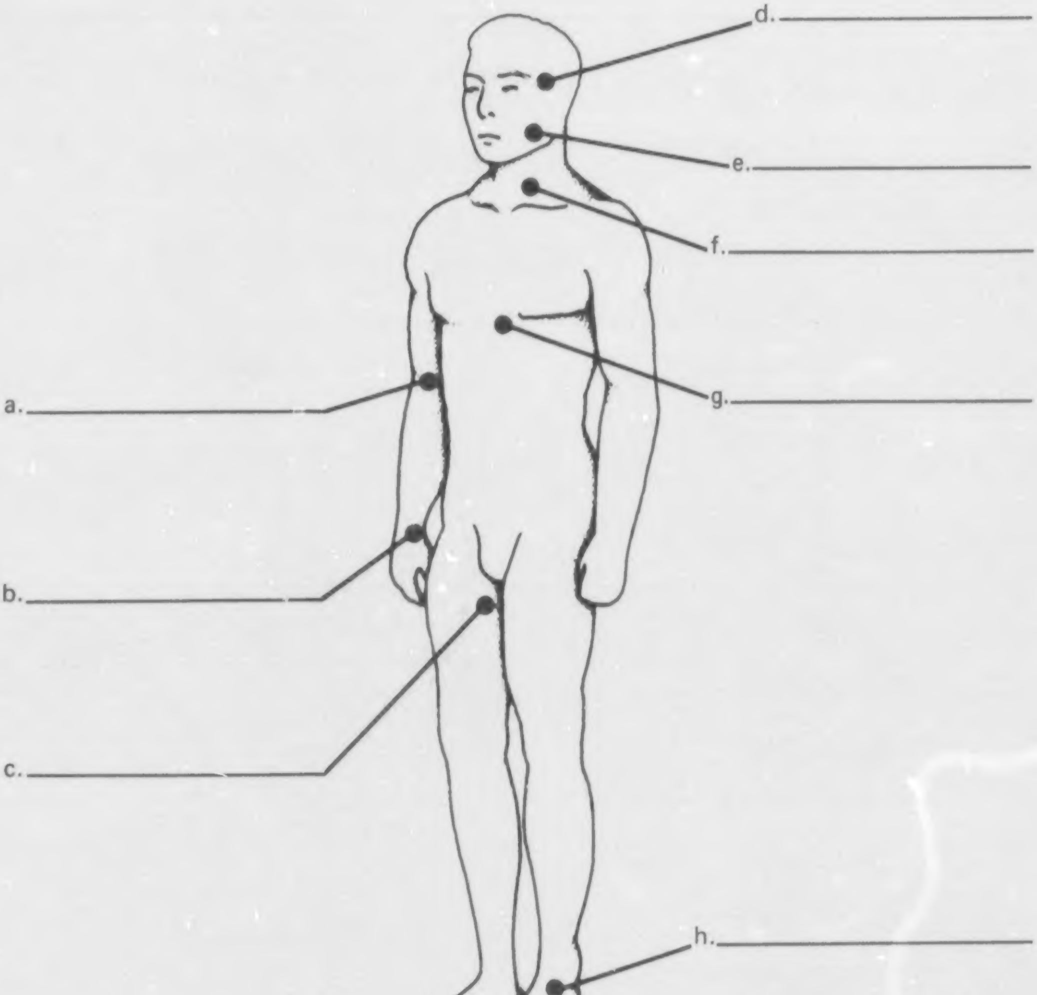
Radial

Carotid

Temporal

Apical

Femoral



8. Match ranges of average pulse rates to specific groups. Write the correct numbers in the blanks provided.

______ a. 80 to 120 beats per minute

______ b. 72 to 90 beats per minute

______ c. 60 to 70 beats per minute

______ d. 110 to 130 beats per minute

______ e. 65 to 80 beats per minute

______ f. 120 to 160 beats per minute

1. Men
2. Women
3. Children over age seven
4. Children age one to seven
5. Infants
6. Fetal heart rate

9. Select from the following list factors that influence heart rate and pulse rate. Mark each correct answer with an "X."

______ a. Activity

______ b. Emotions

______ c. Food intake

______ d. Smoking

______ e. Some drugs

______ f. Disorders of the heart and circulatory system

______ g. Endocrine disturbances

______ h. Weather

______ i. Elevated temperature

10. Select from the following list factors affecting respiration. Mark each correct answer with an "X."

______ a. Fever

______ b. Heart disease

______ c. Drugs

______ d. Emotions

______ e. Pain

______ f. Exercise

______ g. Respiratory disease

______ h. Age

_____ i. Sex

_____ j. Diarrhea

11. Match terms used to describe respiration to the correct definitions. Place the correct numbers in the blanks provided.

_____ a. Breathing possible only when person sits or stands in an erect position

_____ b. Breathing accomplished chiefly by rib muscles

_____ c. Temporary cessation of breathing

_____ d. Uneven respirations from strong to weak with intervals of apnea

_____ e. Normal breathing

_____ f. Bubbling or rattling sounds caused by mucus in the air passages as in bronchitis or pneumonia

_____ g. Difficult or labored breathing

1. Cheyne-Stokes
2. Costal
3. Apnea
4. Eupnea
5. Orthopnea
6. Rales
7. Dyspnea

12. Name five factors affecting blood pressure.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

13. Match types of blood pressure measurements to the correct definitions. Place the correct numbers in the blanks provided.

_____ a. Difference between systolic and diastolic pressure

_____ b. Pressure at its peak during the contraction of the heart

_____ c. Pressure at its lowest when heart is relaxed

1. Pulse pressure
2. Diastolic pressure
3. Systolic pressure

14. Describe sites where blood pressure may be taken.

____

____

____

15. Collect patient data.
16. Read Fahrenheit thermometer.
17. Read Celsius thermometer.
18. Convert Fahrenheit and Celsius thermometer readings.
19. Demonstrate the ability to:
    a. Take height and weight (adult and infant).
    b. Take temperatures.
    c. Take pulse and respirations.
    d. Take blood pressure.

(NOTE: If activities 15-19 have not been finished before the test, ask your instructor when they should be completed.)

BASIC MEDICAL ASSISTANT SKILLS
UNIT I

ANSWERS TO TEST

1. a. 6
   b. 14
   c. 7
   d. 5
   e. 4
   f. 13
   g. 11
   h. 12
   i. 9
   j. 3
   k. 1
   l. 10
   m. 2
   n. 8
   o. 21
   p. 19
   q. 20
   r. 18
   s. 16
   t. 17
   u. 22
   v. 15
   w. 23
2. a, b, c, e, f, g, h, i, k, l, m
3. a. Stethoscope
   b. Thermometers
   c. Sphygmomanometers
   d. Ophthalmoscope
   e. Otoscope
   f. Tongue blade or depressor
   g. Nasal speculum
   h. Percussion hammer
4. a. Oral cavity under tongue
   b. Rectal
   c. Axillary

5. a. 5
   b. 3
   c. 6
   d. 1
   e. 4
   f. 2

6. Any six of the following:
   a. External environment
   b. Internal environment
   c. Sex
   d. Age
   e. Strong emotions
   f. Time of day
   g. Exercise and digestive processes
   h. Infection or disease
   i. Hot or cold foods
   j. Mouth breathing
   k. Smoking

7. a. Brachial
   b. Radial
   c. Femoral
   d. Temporal
   e. Facial
   f. Carotid
   g. Apical
   h. Dorsalis pedis

8. a. 4
   b. 3
   c. 1
   d. 5
   e. 2
   f. 6
9. a, b, d, e, f, g, i
10. a, b, c, d, e, f, g, h, i
11. a. 5
    b. 2
    c. 3
    d. 1
    e. 4
    f. 6
    g. 7
12. Any five of the following:
    a. Condition of the artery and arteriole walls
    b. Rate of heartbeat
    c. Exercise
    d. Emotions
    e. Sex
    f. Hemorrhage
    g. Shock
    h. Drugs
    i. Endocrine activity
    j. Altitude
    k. Smoking
    l. Site where taken

13. a. 1
    b. 3
    c. 2

14. Description should include:
    a. Over brachial artery on the inner surface of the elbow
    b. In the popliteal space with cuff applied above knee
    c. In lower leg over the tibial artery with cuff applied below knee

15. Evaluated to the satisfaction of the instructor

16. Evaluated to the satisfaction of the instructor

17. Evaluated to the satisfaction of the instructor

18. Evaluated to the satisfaction of the instructor

19. Performance skills evaluated to the satisfaction of the instructor

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of surgical asepsis, instrument use and dressing application to choose proper equipment for procedures, assist the physician in various procedures, and protect patients from bacterial invasion to aid in recovery. This knowledge will be evidenced through completion of job sheets and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with surgical asepsis, instrument use, and dressing application to the correct definitions.
2. Select from a list reasons for maintaining aseptic technique.
3. State responsibilities of the medical assistant when a patient is prepared for a special exam or surgical procedure.
4. Identify equipment and instruments used in special exams and procedures.
5. Identify instruments used for routine office procedures.
6. Select from a list reasons for applying dressings.
7. Demonstrate the ability to:
    a. Use surgical scrub.
    b. Use surgical supplies correctly.
    c. Put on sterile gloves.
    d. Apply dressings.

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and job sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information sheet.

   F. Provide real equipment or instruments used in various offices and explain use and care.

      (NOTE: Many central sterile supply departments and medical offices will allow you to borrow equipment for demonstration.)

   G. Demonstrate and discuss procedures outlined in job sheets.

   H. Provide equipment and supplies for students to practice skills.

      (NOTE: It is possible to secure samples of supplies for students to practice with by contacting a detail person, or writing to the company that makes the product.)

   I. Allow for time for return demonstration.

   J. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--Instruments Used for Routine Office Procedures

      2. TM 2--Instruments Used for Routine Office Procedures (Continued)

      3. TM 3--Instruments Used for Routine Office Procedures (Continued)

D. Job sheets

1. Job Sheet #1--Use Surgical Scrub
2. Job Sheet #2--Use Surgical Supplies Correctly
3. Job Sheet #3--Put On Sterile Gloves
4. Job Sheet #4--Apply Dressings

E. Test

F. Answers to test

III. Unit references:

A. Sloan, Jamee. *Health Service Careers.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1978.

B. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

IV. Filmstrips:

A. "Medical Asepsis." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

B. "Sterile Technique and Dressing Change." Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

INFORMATION SHEET

I. Terms and definitions

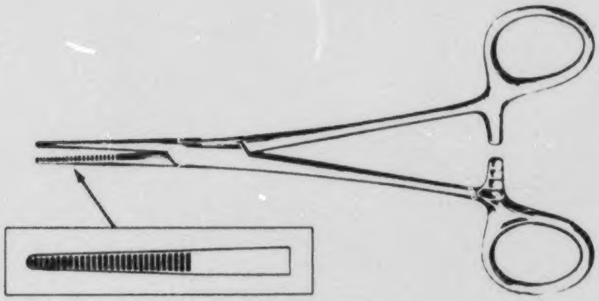
A. Clean (as applied to medical asepsis)--Free of gross contamination and many microorganisms

B. Dressing--Protective, supportive covering placed over an injured or diseased body part

C. Forceps--Surgical instrument with two opposing blades or limbs controlled by handles

D. Hemostat--Instrument used to stop the flow of blood

Example:



(NOTE: The hemostat or clamp can be used for other procedures, where there is a need for security that is provided by their various shapes, lengths, and grooved edges.)

E. Local anesthetic--Substance causing insensitivity to pain and loss of sensation; may be topical or given by infiltration injection

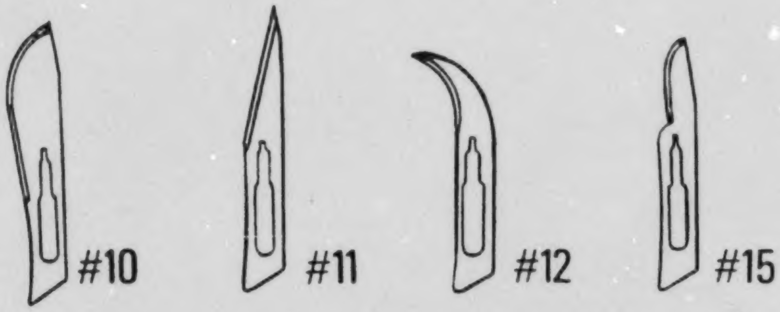
F. Medical asepsis--Procedures used to protect patient and environment from the transmission of disease-producing organisms from one person to another

INFORMATION SHEET

G. Scalpel--Surgical cutting instrument made up of a knife handle and a removable blade

(NOTE: There are many sizes of handles and edges of knife blades available. These are coded with numbers for easy identification.)

Examples:



H. Sterile (as applied to surgical technique)--Free of microorganisms and spores

I. Surgical asepsis--Procedures used to keep objects or areas sterile or completely free of microorganisms

J. Suture--Material used to stitch parts together

(NOTE: Suture comes in many materials and is packaged in different forms. Become familiar with your physician's preference and keep a quantity stocked.)

II. Reasons for maintaining aseptic technique

A. Failure to be exacting and meticulous is not readily detectable

(NOTE: Aseptic techniques are only as good as the most careless person performing them. Breaks in technique endanger other health care personnel as well as the patient.)

B. Due to widespread and indiscriminate use of antibiotics, many strains of bacteria, resistant to antibiotics, are developing

C. Some strains of microorganisms can survive for months or years in dust and linens

D. Some disease-producing organisms can be present in the nasal passages or on the skin of patients and health care personnel, without causing any clinical symptoms

INFORMATION SHEET

E. Disease-producing organisms can be carried from one patient to another on improperly cleaned equipment, such as thermometers

F. Persons most susceptible to bacterial infection are newborn infants, debilitated patients, and patients who have breaks in the skin, such as surgical wounds

G. It is the health team's responsibility to maintain its own aseptic technique and to stress the importance of aseptic technique to other office workers

III. Responsibilities of the medical assistant when a patient is prepared for a special exam or surgical procedure

A. Make sure the patient understands what type of procedure will take place

B. Give clear instructions to patient before procedure

Examples: Take oral laxative or enema the night before exam; do not eat or drink after midnight the day before the exam or surgery; do not take certain medications

C. Reassure patient concerning procedure

(NOTE: The number-one factor that causes fear is not knowing what is to take place. Explain each step of the procedure and tell the patient there will be some discomfort, if this is true; allow them to prepare for this.)

D. Check chart to see if patient has sensitivity to any medications that might be used

E. Obtain a signed consent form, if needed

F. Make sure all equipment is ready before procedure takes place

G. Give sedative, if needed

H. Assist physician

I. Comfort patient when needed

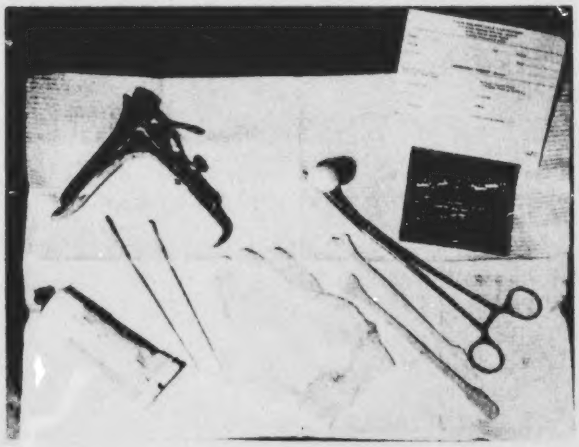
J. Clean room after patient leaves and make sure specimens are properly labeled and sent or taken to appropriate laboratory

INFORMATION SHEET

IV. Equipment and instruments used in special exams and procedures

A. Pelvic examination and pap smear

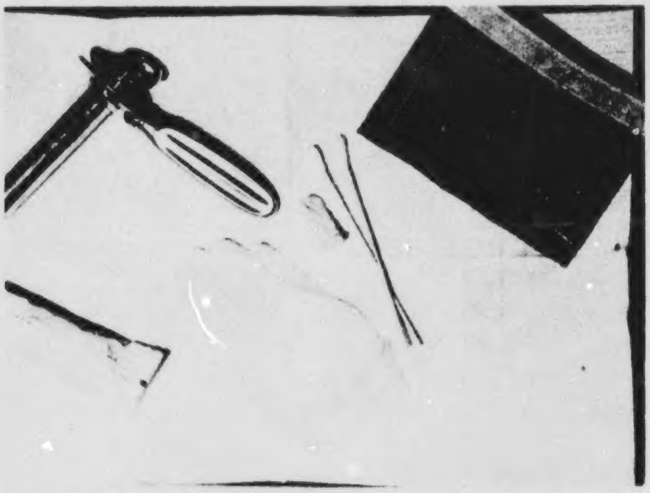
(NOTE: If specimen is to be mailed to another lab, have mailing container ready.)



1. Microscope slides
2. Cotton applicators
3. Vaginal speculum
4. Requisition
5. Lubricant
6. Sponge holder
7. Wooden spatula
8. Gloves

(NOTE: If further examination needs to be done, additional equipment may be added according to physician's preference or patient may be referred to gynecologist.)

B. Rectal examination

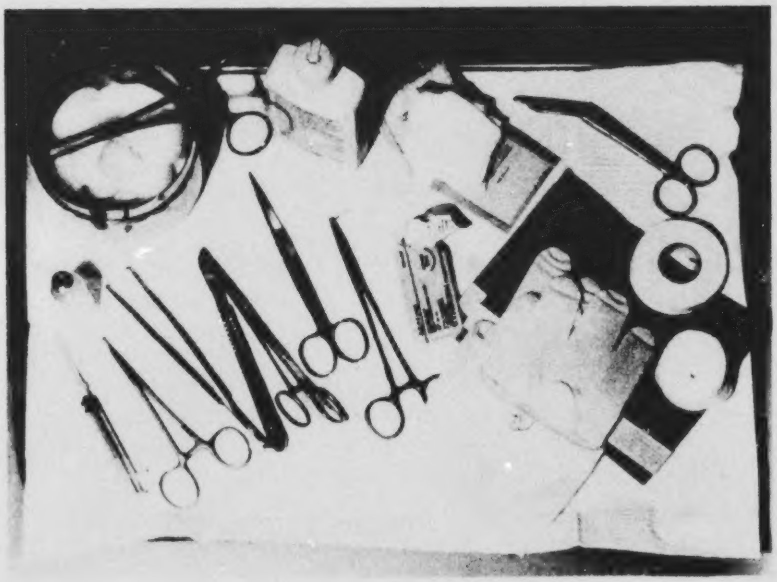


1. Anoscope
2. Lubricant
3. Gloves
4. Rubber finger cot
5. Cotton applicators
6. Slides
7. Drape

(NOTE: This is a routine rectal exam tray. If further examination needs to be done a proctoscope or a sigmoidoscope will be needed.)

INFORMATION SHEET

C. Small laceration tray



1. Cotton balls
2. Sponge holder
3. Antiseptic solution
4. Gauze pads
5. Bandage scissors
6. Tape
7. Rolled gauze
8. Sterile drapes
9. Sterile gloves
10. Suture
11. Needle holder
12. Straight scissors
13. Straight hemostat
14. Knife blade and handle
15. Thumb forceps
16. Curved hemostat
17. Syringe with needle
18. Local anesthetic

(NOTE: This equipment is basically to be used in suturing lacerations. Additional equipment and dressings, medications, or drains may be added as required. Type and size of suture, needle and syringe, and strength of local anesthetic will be dictated by physician's preference.)

V. Instruments used for routine office procedures (Transparencies 1, 2, and 3)

A. Bandage scissors

B. Straight surgical scissors

C. Transfer forceps

INFORMATION SHEET

D. Suture

(NOTE: Suture comes in a variety of substances, with or without weld-on needles.)

E. Plain thumb forceps

F. Rattooth thumb forceps

G. Needle holder

H. Cartridge syringe

I. Syringe and needle

J. Curved hemostat

K. Straight hemostat

L. Scalpel

VI. Reasons for applying dressings

A. To prevent contamination

B. To protect wound from further injury

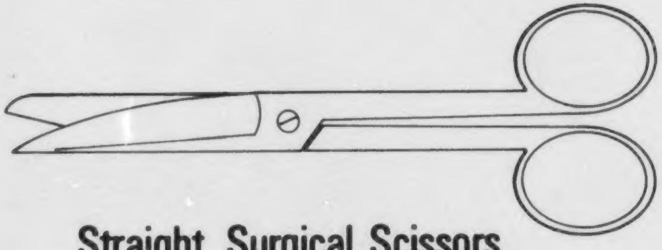
C. To apply medication

D. To apply pressure to keep edges of wound together

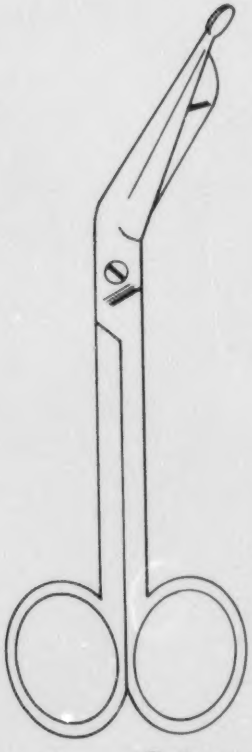
E. To absorb drainage

F. To promote healing

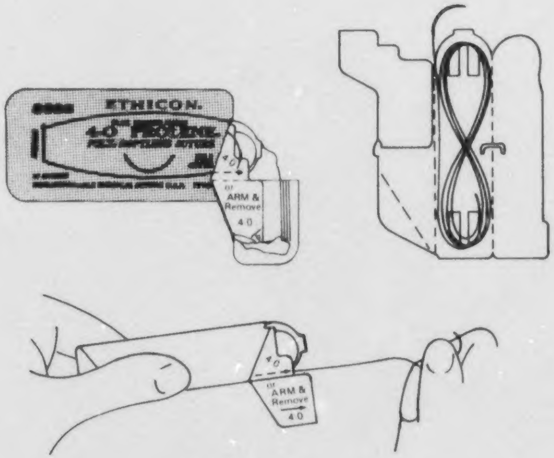
Instruments Used for Routine Office Procedures



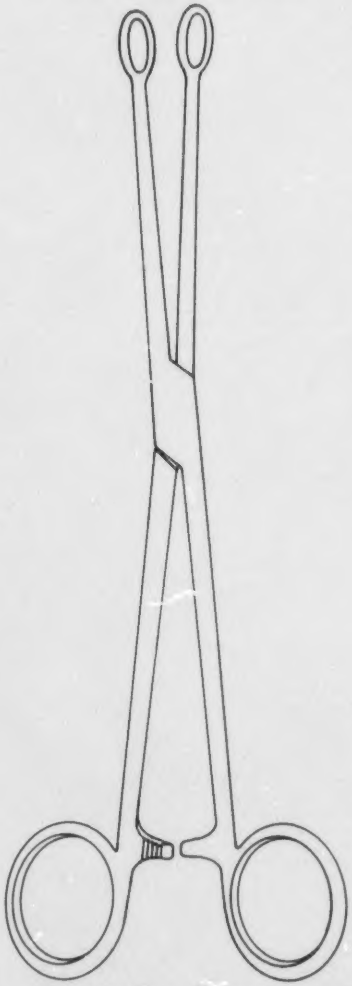
Straight Surgical Scissors



Bandage Scissors


ETHICON.
4-0
ARM &
Remove
4 0
ARM &
Remove
4 0

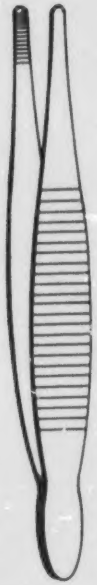
Suture



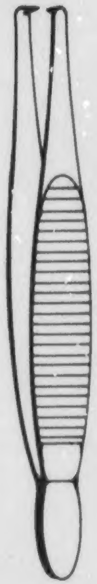
Transfer Forceps

Instruments Used for Routine Office Procedures

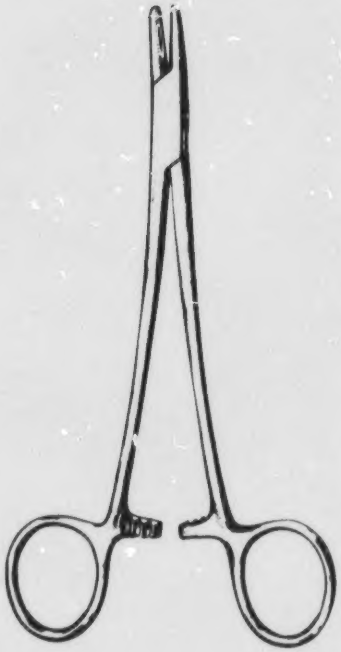
(Continued)



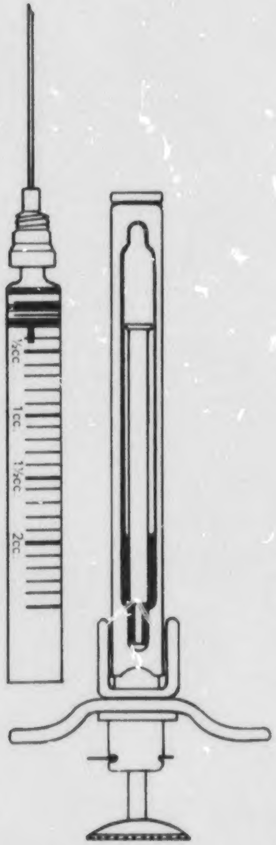
Plain
Thumb Forceps



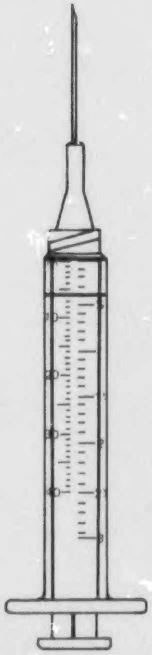
Rattooth
Thumb Forceps



Needle Holder



Cartridge Syringe



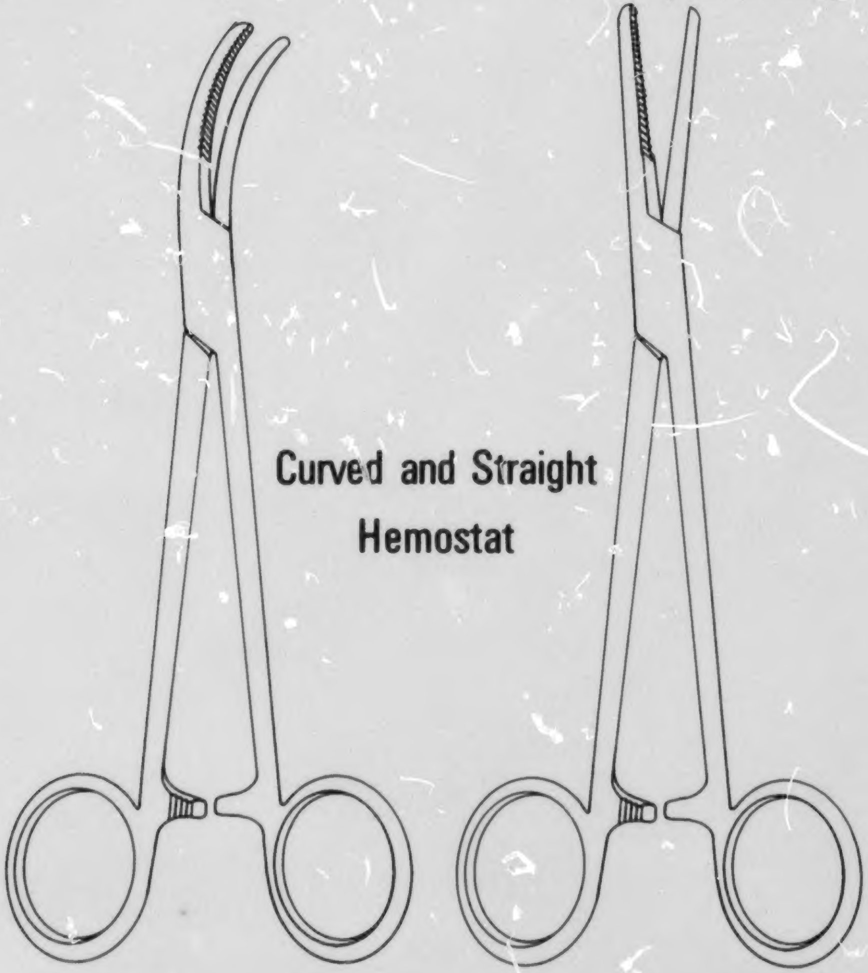
Needle
and Syringe

TM 2

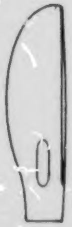
MA - 73-D

Instruments Used for Routine Office Procedures

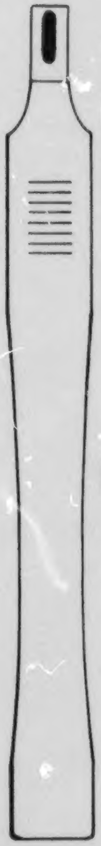
(Continued)



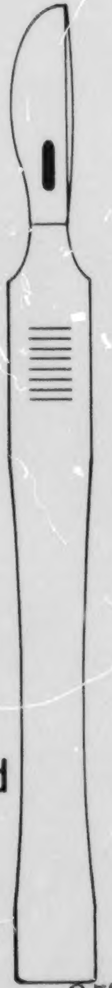
Curved and Straight Hemostat



Blade



Handle



Scalpel Assembled

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

JOB SHEET #1--USE SURGICAL SCRUB

I. Equipment

  A. Scrub brushes

  B. Nail file or orange stick

  C. Recommended antibacterial soap

  D. Scrub sink

  E. Towel

  F. Mechanical hand dryer, if used

  G. Knee controls in sink

II. Procedure

  A. Prepare for scrubbing

    1. Wear freshly laundered gown or scrub suit

    2. Roll sleeves to 3" above elbow

    3. Wear scrub cap or turban; cover all hair completely

    4. Clean fingernails

  B. Scrub hands using antibacterial cleanser

    1. Wet hands and forearms

    2. Spread a few drops of cleanser over hands and arms

    3. Rub hands and arms a few times and add more water to give more suds

    4. Clean under the nails with orange stick

    5. Wet hands and forearms and re apply cleanser

    6. Pick up scrub brush from sterile container

    7. Wet brush and use cleanser on brush

    8. Add small amount of water to brush to produce suds

JOB SHEET #1

9. If right-handed, hold brush in right hand and scrub left hand

10. Using circular brush motion, scrub all four sides of the fingers, remainder of hand, and forearm (Figures 1 and 2)

FIGURE 1

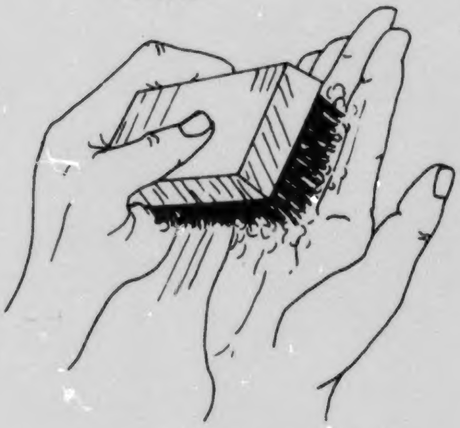
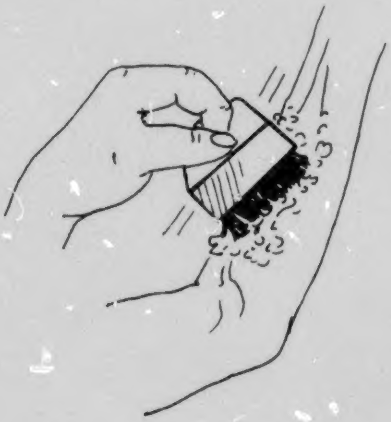


FIGURE 2



11. After scrubbing, hold hands higher than elbows to prevent contaminated water from running down

12. Change brush to other hand and repeat procedure

13. Continue scrubbing one hand, arm, and then next for 3-5 minutes, in emergency, or 7-10 minutes in delivery room or non-emergency situations

14. Rinse hands, arms, and brush well under running water

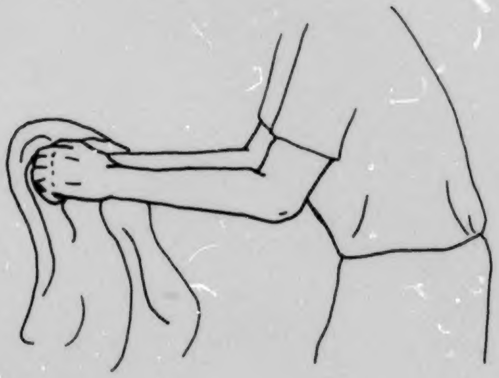
15. Keep hands higher than elbows in front of you

JOB SHEET #1

C. Dry hands with sterile towel (Figure 3)

(NOTE: By bending at the waist, contamination of towel is prevented.)

FIGURE 3



1. Place upper end of towel in one hand and dry fingers of other hand, then the arm of same side
2. Transfer lower end of towel and dry hand and dry fingers, hand, and arm of second hand

   (NOTE: Care must be taken not to touch the towel against uniform or scrub gown while drying.)

3. Drop towel in designated container or place
4. Hold both hands higher than the elbows

III. Procedure for short scrub technique

A. Wash hands and arms well

B. Clean nails with file or orange sticks; use plenty of running water

C. With brush, scrub one hand and arm and then the other, using the following brush count; hands--20 strokes to nails, 10 strokes to fingers and surfaces of hands, arms--10 strokes to below elbows

D. Rinse hands and arms; turn off faucet with towel

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

JOB SHEET #2--USE SURGICAL SUPPLIES CORRECTLY

I. Equipment

  A. Transfer forceps

  (NOTE: Transfer forceps may also be called *handling forceps, lifting forceps,* or *pick-up forceps*.)

  B. Forceps container with disinfectant

  C. Containers of sterile supplies

    1. Sterile towels and/or tray covers

    2. 4 x 4's

    3. Cotton balls

    4. Applicators or swabs

    5. Instruments

II. Procedure for using transfer forceps

  A. Wash hands

  B. Remove transfer forceps from container

  (NOTE: Keep only one set of forceps in each container.)

    1. Withdraw forceps vertically, taking care not to touch sides of container

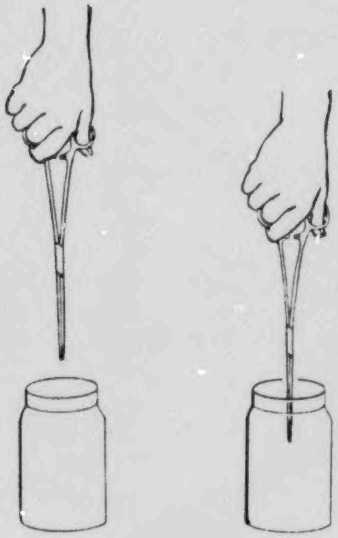
    (NOTE: Remember only the part of the transfer forceps covered by solution in the container is sterile.)

JOB SHEET #2

2. Hold forceps with tip down to prevent disinfectant from running back and forth over both sterile and unsterile protions of the forceps

   (NOTE: Always keep forceps and container in front of you; never reach back to obtain forceps; see Figure 1.)

FIGURE 1



C. Return forceps to container

1. Take care not to touch the outside or rim of container
2. Make sure tips are together whenever forceps are lifted from or returned to container

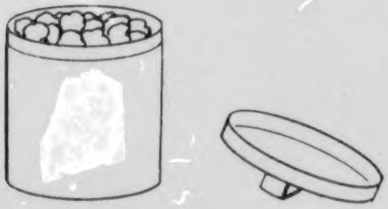
III. Procedure for removing the cover from a container of sterile supplies

A. Hold cover, with inner surface down, if cover is held

JOB SHEET #2

B. Place outer surface down, to prevent contaminating the inside, if cover is laid down (Figure 2)

FIGURE 2



IV. Procedure for preparing a sterile field on a tray or table

(NOTE: Remember, the 2.54 cm (1 in) outer edge of a prepared field is considered contaminated; keep all articles inside this margin.)

A. Lift cover from container of towels

B. Remove one towel with transfer forceps

C. Replace cover

D. Transfer towel to free hand

E. Replace transfer forceps

F. Open towel, touching only the side which will touch the tray or table surface

G. Lay towel on tray or table

H. Do not reach across the sterile field or brush uniform on edge of sterile areas

V. Procedure for handling 4 x 4's, cotton balls, applicators

A. Lift cover from container

JOB SHEET #2

B. Remove desired number of articles with transfer forceps (Figures 3 and 4)

FIGURE 3

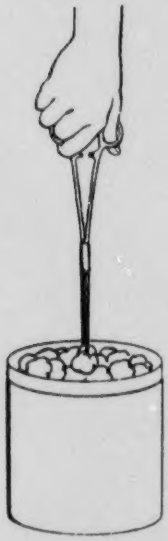
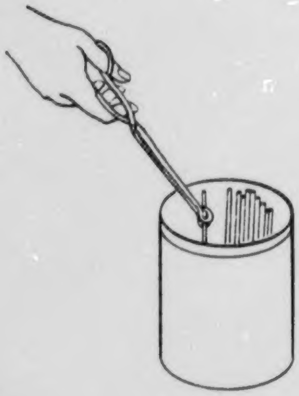


FIGURE 4



C. Place articles along one side of the sterile surface

(NOTE: DROP sterile articles onto sterile field; do not let forceps touch the field.)

D. Place along other side of sterile field one or more 4 x 4's on which to lay instruments

(NOTE: In some cases, a sterile basin is placed on the tray to receive instruments from the disinfectant solution.)

E. Replace cover on container

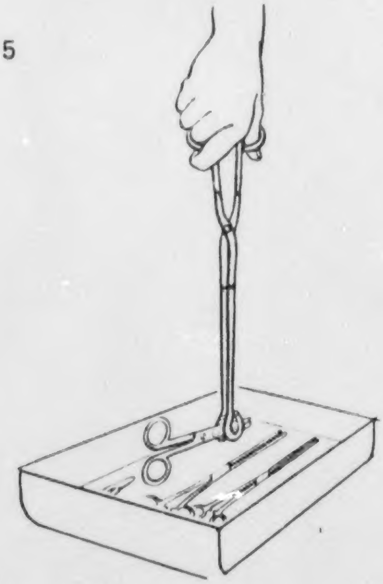
VI. Procedure for handling instruments

A. Remove cover from instrument container

JOB SHEET #2

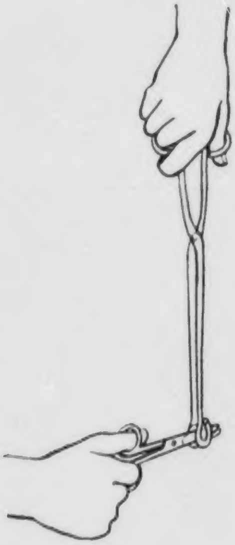
B. Lift out desired instrument with transfer forceps (Figure 5)

FIGURE 5



C. Place instrument on the 4 x 4 or in the basin provided, or hand instrument to another person (Figure 6)

FIGURE 6



JOB SHEET #2

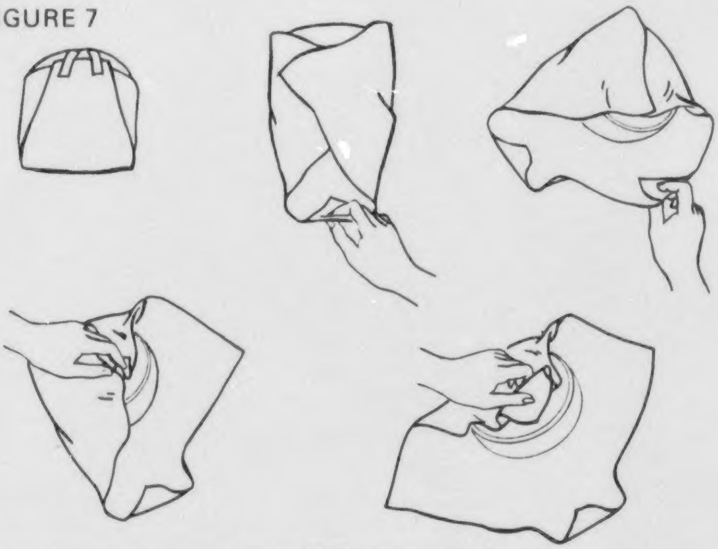
VII. Procedure for opening a large pack

A. Place large packs to be opened on table

B. Loosen fasteners

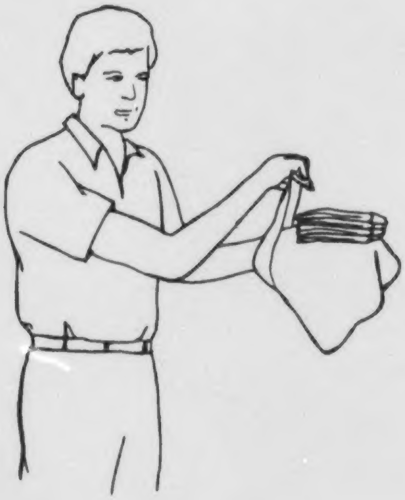
C. Fold back one flap at a time, grasping the wrapper from outside so fingers never touch the inside (Figure 7)

FIGURE 7



D. Hold pack so that last flap opened is toward you (Figure 8)

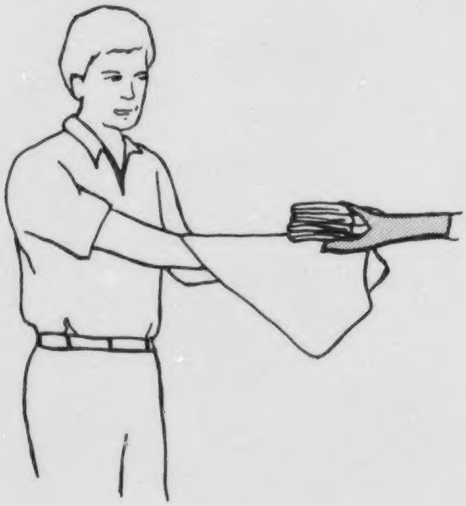
FIGURE 8



JOB SHEET #2

E. Use articles from pack as needed, or transfer to a sterile tray with transfer forceps or sterile gloves (Figure 9)

FIGURE 9



VIII. Procedure for opening a small pack

A. Loosen fasteners

B. Hold pack in one hand

C. Open flaps one at a time with other hand

D. Hold pack so that last flap opened is toward you

E. Hand article to someone wearing gloves, or transfer with transfer forceps

IX. Procedure for adding solutions to a tray

A. Place container on tray for receiving the solution using transfer forceps

B. Remove cap from container of solution

C. Pour solution gently without splashing it

(NOTE: Remember that liquid on the sterile field makes the field unsterile.)

D. Replace cap on solution container

JOB SHEET #2

X. Procedure for care of a prepared tray

A. Cover tray with another sterile towel, being careful not to touch underside of towel, which will touch tray

(NOTE: Trays should not be prepared too long before use due to the danger of contamination.)

B. Leave tray covered until needed or take to exam room for use

(NOTE: Many health care facilities use commercially prepared set-ups. Materials should be used according to manufacturer's recommendations.)

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

JOB SHEET #3--PUT ON STERILE GLOVES

I. Equipment

A. Package of sterile gloves

(NOTE: Gloves come in various sizes; select ones that fit properly.)

B. Soap

C. Brush

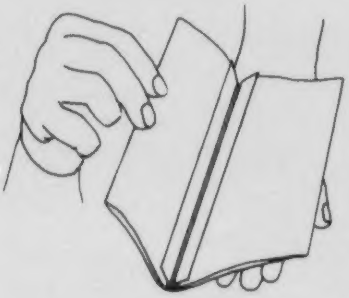
D. Paper towels

II. Procedure

A. Wash hands

B. Open sterile glove wrapper, touching only the outside (Figure 1)

FIGURE 1



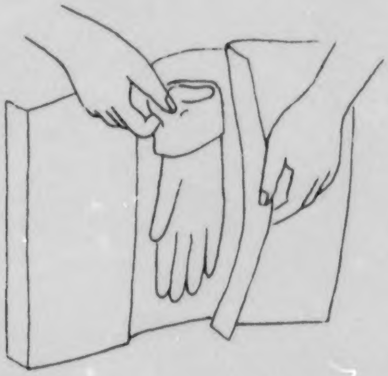
C. Scrub hands for two minutes using brush, soap, and water as needed

D. Rinse and dry hands

JOB SHEET #3

E. Remove one glove from wrapper by grasping cuff on the fold (Figure 2)

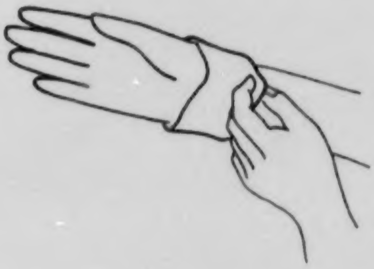
FIGURE 2



F. Put glove on by pulling on folded edge of cuff (Figure 3)

(NOTE: Do not touch outside of glove with fingers of the ungloved hand.)

FIGURE 3

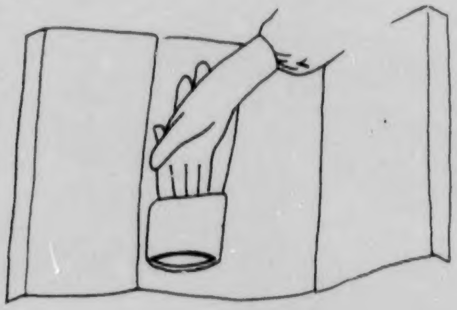


JOB SHEET #3

G. Remove second glove from wrapper by slipping *gloved* fingers *inside* the folded cuff (Figure 4)

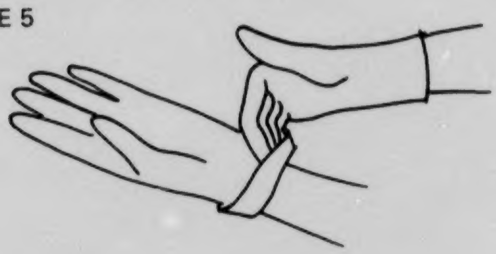
(NOTE: Do not touch gloved hand to outside of wrapper, which is unsterile.)

FIGURE 4



H. Pull second glove on, taking care not to touch outside of gloved fingers to ungloved hand (Figure 5)

FIGURE 5



I. Adjust fingers as necessary

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

JOB SHEET #4--APPLY DRESSINGS

I. Equipment

A. Dressings

(NOTE: Choose the appropriate dressing for the type of area to be covered, or the type and size of wound.)

B. Tape

Examples: Paper, adhesive, nylon

C. Scissors (bandage or straight edge)

D. Cotton balls or cotton swabs for medication

II. Procedure for self-adhering bandages

(NOTE: These bandages may have gauze pads, with or without medication, plus adhesive tape strips for securing to area. Many sizes and shapes can be purchased to hold a dressing in place, immobilize a body part, support an area, or apply pressure.)

A. Wash hands

B. Assemble equipment

C. Identify patient and explain procedure

D. Make sure area to be covered is clean and dry

E. Apply medication, if indicated, and other types of dressing, if needed

JOB SHEET #4

F. Grasp edges of the paper covering and pull back to expose the dressing (Figure 1)

(CAUTION: Do not touch the sterile pad with your hands or let it touch your uniform or any other object.)

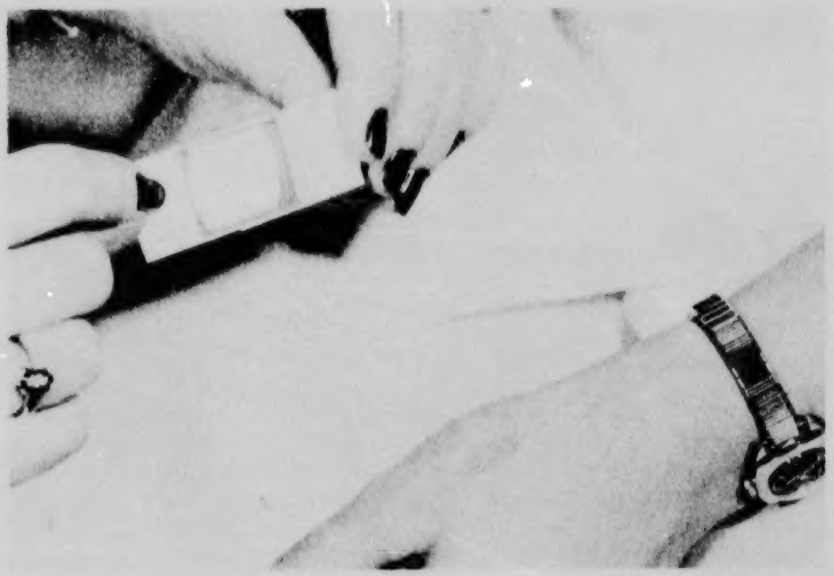


FIGURE 1

G. Place gauze pad over wound (Figure 2)

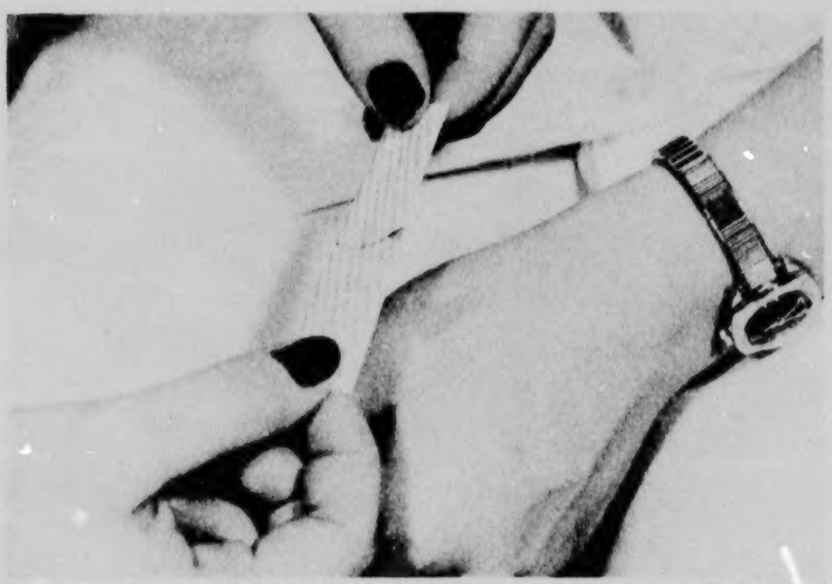


FIGURE 2

JOB SHEET #4

H. Holding one side firm, peel off paper, using gentle pressure to apply adhesive strip to skin (Figure 3)

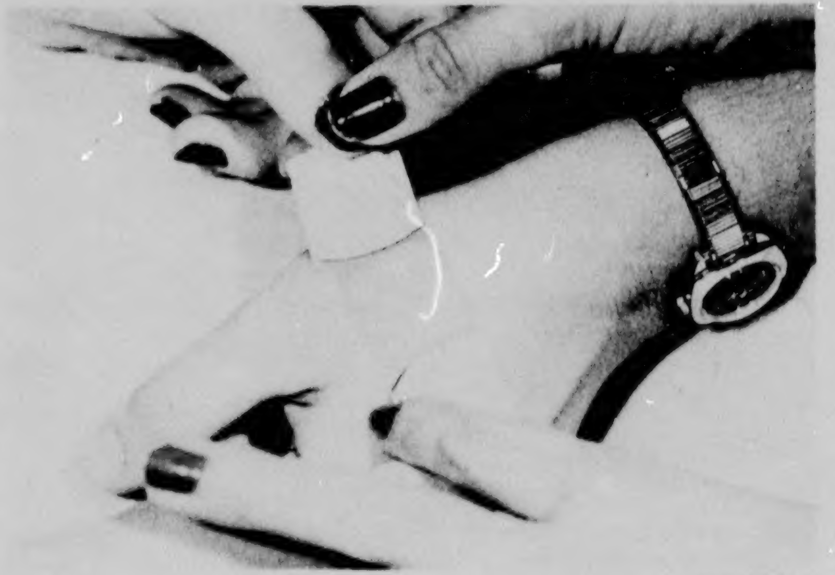


FIGURE 3

I. Peel off rest of paper, applying other side of adhesive to skin

(CAUTION: Do not apply too tightly or circulation will be impaired.)

(NOTE: These types of bandages usually have a type of non-sticky substance over the gauze so it will not stick to the wound, causing discomfort when removed.)

III. Procedure for roller bandages

(NOTE: A roller type bandage should fasten securely over a dressing, but not tight enough to interfere with circulation. Be sure to check for swelling, changes of color and coldness of tips of fingers or toes, and listen for complaints of numbness or tingling before patient leaves the office; instruct them to watch for these conditions when they get home.)

A. Circular bandaging

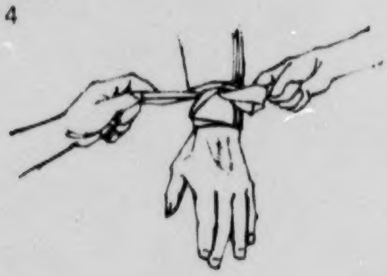
(NOTE: Gauze, cloth, or elastic wrap may be used to secure dressing.)

1. Position dressing and anchor the bandage
2. Wrap the area by encircling each layer with the next on top

JOB SHEET #4

3. Secure with tape, pins, or clips, or split bandage and tie a knot (Figure 4)

FIGURE 4

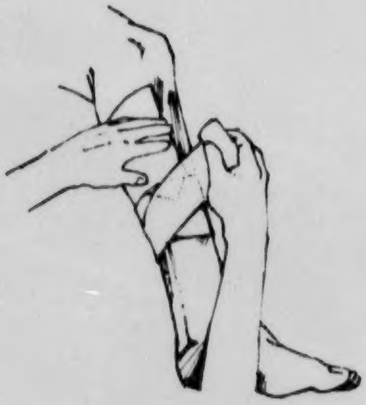


B. Spiral bandaging

(NOTE: Gauze, cloth, or elastic wrap may be used to secure dressing.)

1. Anchor bandage over dressing (Figure 5)

FIGURE 5

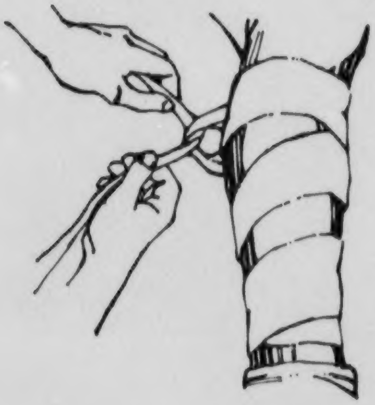


JOB SHEET #4

2. Encircle the area by making spiral turns of the bandage moving around the limb until dressing is covered

3. Secure the bandage by tying it off if possible; this makes it more supportive than tape or clips; if using an elastic wrap, clips can be used effectively (Figure 6)

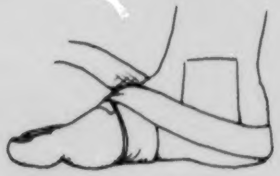
FIGURE 6



C. Figure-eight bandage, for ankle

1. Position the bandage end under the instep of the foot and make two or three additional turns around the foot (Figure 7)

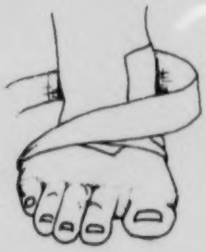
FIGURE 7



JOB SHEET #4

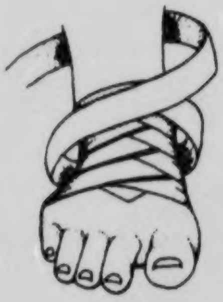
2. Bring the bandage up across the foot, then in around the ankle, downward across the front of the foot, and across under the arch (Figure 8)

FIGURE 8



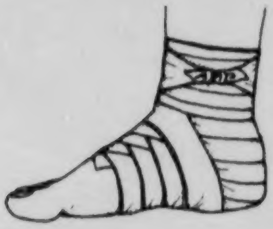
3. Make several figure-eight turns, each turn overlapping the previous one by about two-thirds the width of the bandage; to give more support give two occasional turns around the ankle (Figure 9)

FIGURE 9



4. Tie off ends, or use clips with elastic bandage (Figure 10)

FIGURE 10



(NOTE: This type of bandage is effective for ankles and wrists. It is quite supportive to the injured limb.)

MA - 99-D

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

TEST

NAME ______________________________ SCORE ____________

1. Match terms associated with surgical asepsis, instrument use, and dressing application to the correct definitions. Place the correct numbers in the blanks provided.

______a. Free of microorganisms and spores

______b. Instrument used to stop the flow of blood

______c. Free of gross contamination and many microorganisms

______d. Procedures used to keep objects or areas sterile or completely free of microorganisms

______e. Surgical instrument with two opposing blades or limbs controlled by handles

______f. Procedures used to protect patient and environment from the transmission of disease-producing organisms from one person to another

______g. Surgical cutting instrument made up of a knife handle and a removable blade

______h. Substance causing insensitivity to pain and loss of sensation; may be topical or given by infiltration injection

______i. Material used to stitch parts together

______j. Protective, supportive covering placed over an injured or diseased body part

1. Medical asepsis
2. Surgical asepsis
3. Clean (as applied to medical asepsis)
4. Sterile (as applied to surgical technique)
5. Forceps
6. Hemostat
7. Scalpel
8. Suture
9. Local anesthetic
10. Dressing

2. Select from the following list reasons for maintaining aseptic technique. Mark each correct answer with an "X."

______a. Disease-producing organisms can be carried from one patient to another on improperly cleaned equipment, such as thermometers

______b. It is the health team's responsibility to maintain its own aseptic technique and to stress the importance of aseptic technique to other office workers ______c. Prevention of malpractice and other lawsuits being brought against health workers

______d. Failure to be exacting and meticulous is not readily detectable

______e. Persons most susceptible to bacterial infection are newborn infants, debilitated patients, and patients who have breaks in the skin, such as surgical wounds

______f. Some disease-producing organisms can be present in the nasal passages or on the skin of patients and health care personnel, without causing any clinical symptoms

______g. Due to widespread and indiscriminate use of antibiotics, many strains of bacteria, resistant to antibiotics, are developing

______h. Some strains of microorganisms can survive for months or years in dust and linens

3. State responsibilities of the medical assistant when a patient is prepared for a special exam or surgical procedure.

a. ____

____

b. ____

____

c. ____

____

d. ____

____

e. ____

____

f. ____

____

g. ____

____

h. ____

____

i. ______________________________

____

j. ______________________________

____

4. Identify equipment and instruments used in special exams and procedures. Use the list given and place the name of the item on the correct tray. (Some items may be found on more than one tray.)

Straight hemostat
Sterile drape
Microscope slides
Slides
Lubricant
Local anesthetic
Wooden spatula
Cotton applicators
Rolled gauze
Curved hemostat
Vaginal speculum
Syringe with needle
Rubber finger cot
Gauze pads
Straight scissors
Needle holder
Tape
Sterile gloves
Knife blade and handle
Thumb forceps
Anoscope
Bandage scissors
Suture
Cotton balls
Requisition
Sponge holder
Antiseptic solution

a. Pelvic examination and pap smear

1) ____________________ 2) ____________________

3) ____________________ 4) ____________________

5) ____________________

6) ____________________

7) ____________________

8) ____________________

b. Rectal examination

1) ____________________

2) ____________________

3) ____________________

4) ____________________

5) ____________________

6) ____________________ 7) ____________________

c. Small laceration tray

1) ____________________ 2) ____________________

3) ____________________

4) ____________________

5) ____________________

6) ____________________ 7) ____________________

8) ____________________ 9) ____________________

10) ____________________ 11) ____________________

12) ____________________ 13) ____________________

14) ____________________ 15) ____________________

16) ____________________ 17) ____________________

18) ____________________

5. Identify instruments used for routine office procedures. Using the list below, write the correct terms in the blanks provided.

Needle holder

Scalpel

Plain thumb forceps

Bandage scissors

Suture

Needle with syringe

Transfer forceps

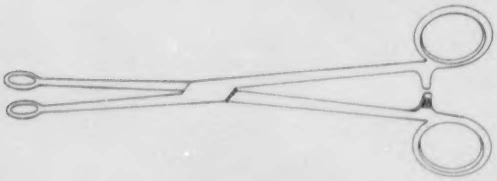
Straight hemostat

Curved hemostat

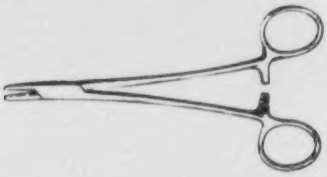
Rattooth thumb forceps

Cartridge syringe

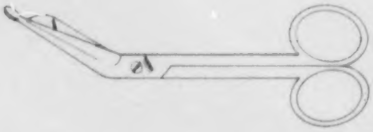
Straight surgical scissors



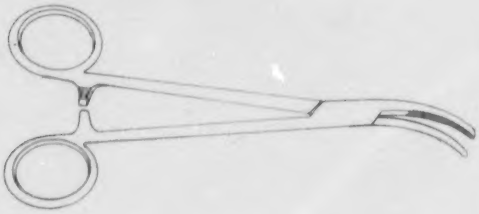
a. ________________________________



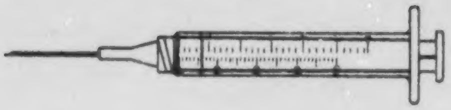
b. ________________________________



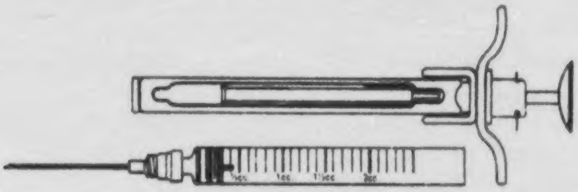
c. ________________________________



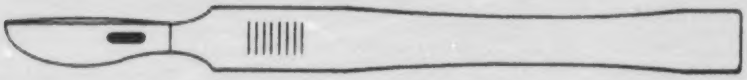
d. ________________________________



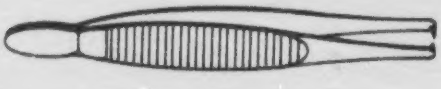
e. ______________________________



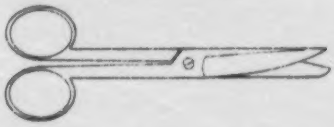
f. ______________________________



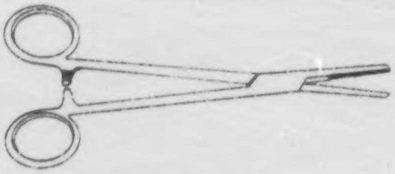
g. ______________________________



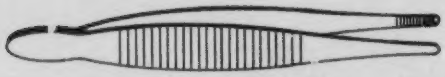
h. ______________________________



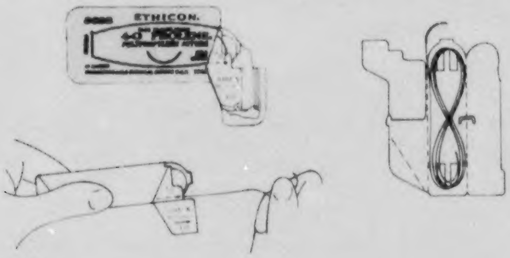
i. ______________________________



j. ______________________________



k. ____



l. ____

6. Select from the following list reasons for applying dressings. Mark each correct answer with an "X."

   ______a. To apply medication

   ______b. To promote healing

   ______c. To apply pressure to keep edges of wound together

   ______d. To prevent swelling

   ______e. To prevent contamination

   ______f. To absorb drainage

   ______g. To protect wound from further injury

7. Demonstrate the ability to:

   a. Use surgical scrub.

   b. Use surgical supplies correctly.

   c. Put on sterile gloves.

   d. Apply dressings.

   (NOTE: If these activities have not been finished before the test, ask your instructor when they should be completed.)

SURGICAL ASEPSIS, INSTRUMENT USE, AND DRESSING APPLICATION
UNIT II

ANSWERS TO TEST

1. a. 4
   b. 6
   c. 3
   d. 2
   e. 5
   f. 1
   g. 7
   h. 9
   i. 8
   j. 10

2. a, b, d, e, f, g, h

3. a. Make sure the patient understands what type of procedure will take place
   b. Give clear instructions to patient before procedure
   c. Reassure patient concerning procedure
   d. Check chart to see if patient has sensitivity to any medications that might be used
   e. Obtain a signed consent form, if needed
   f. Make sure all equipment is ready before procedure takes place
   g. Give sedative, if needed
   h. Assist physician
   i. Comfort patient when needed
   j. Clean room after patient leaves and make sure specimens are clearly labeled and sent or taken to appropriate laboratory

4. a. Tray should include:
   1) Microscope slides
   2) Cotton applicators
   3) Vaginal speculum
   4) Requisition
   5) Lubricant
   6) Sponge holder

  7) Wooden spatula
  8) Sterile gloves

b. Tray should include:
  1) Anoscope
  2) Lubricant
  3) Sterile gloves
  4) Rubber finger cot
  5) Cotton applicators
  6) Slides
  7) Sterile drape

c. Tray should include:
  1) Cotton balls
  2) Sponge holder
  3) Antiseptic solution
  4) Gauze pads
  5) Bandage scissors
  6) Tape
  7) Rolled gauze
  8) Sterile drape
  9) Sterile gloves
  10) Suture
  11) Needle holder
  12) Straight scissors
  13) Straight hemostat
  14) Knife blade and handle
  15) Thumb forceps
  16) Curved hemostat
  17) Syringe with needle
  18) Local anesthetic

5. a. Transfer forceps
    b. Needle holder
    c. Bandage scissors
    d. Curved hemostat
    e. Needle with syringe
    f. Cartridge syringe
    g. Scalpel
    h. Rattooth thumb forceps
    i. Straight surgical scissors
    j. Straight hemostat
    k. Plain thumb forceps
    l. Suture
6. a, b, c, e, f, g
7. Performance skills evaluated to the satisfaction of the instructor

LABORATORY TESTS AND X-RAYS
UNIT III

UNIT OBJECTIVE

After completion of this unit, the student should be able to prepare patients so that laboratory tests and X-rays results are accurate. The student should also be able to make and keep current a file of cards showing laboratory preparation procedures for specific clinics, hospitals, and laboratories. This knowledge will be evidenced by completion of the assignment sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with laboratory tests and X-rays to the correct definitions.
2. Select from a list common laboratory tests using blood specimens.
3. Match elements tested in an SMA to the specific functions they evaluate.
4. Select from a list components counted in a complete blood count.
5. Distinguish between normal values for men and women in different cell counts.
6. List common laboratory tests using urine specimens.
7. Select from a list tests performed in a routine urinalysis.
8. State safety factors to observe when X-rays are taken.
9. Describe patient preparation for common laboratory tests and X-rays.
10. Prepare a card file.

LABORATORY TESTS AND X-RAYS
UNIT III

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and assignment sheets.

   C. Discuss unit and specific objectives.

   D. Discuss information and assignment sheets.

   E. Take field trips or arrange for a few students at a time to visit laboratories and X-ray departments to see how tests are carried out.

   F. Teach laboratory tests skills if equipment is available and if applicable to area where student will be working.

   G. Obtain copies of laboratory/X-ray requisition and report forms to familiarize students with format.

   H. Obtain extra laboratory reports; read results to students and have them record values.

   (NOTE: This exercise wll give the students an opportunity to practice taking reports verbally and to learn various normal values for each test.)

   I. Invite X-ray technicians to discuss safety factors and special X-rays that are now being done.

   Examples: CAT scan, isotopes

   J. Borrow different X-rays from department and show students the difference between good and bad preparation of the patient.

   Examples: Colon films showing fecal material obstructing the view, and a clear film of an emptied colon

   K. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Assignment Sheet #1--Prepare a Card File

   D. Test

   E. Answers to test

III. Unit references:

A. Cooper, Marian G., and Bredow, Miriam. *The Medical Assistant.* 4th ed. New York: McGraw-Hill Book Company, 1978.

B. French, Ruth M. *The Nurse's Guide to Diagnostic Procedures.* New York: McGraw-Hill Book Company, 1971.

IV. Films:

A. *Radiation–Physician and Patient.* Color, 45 minutes, Oklahoma State Department of Health, 1959. Available from Oklahoma State Department of Health, N.E. 10th Street and Stonewall, Oklahoma City, Oklahoma 73105.

B. *You Can Be Safe From X-Ray.* Black and white, 10 minutes, Oklahoma State Department of Health, 1954. Available from Oklahoma State Department of Health, N.E. 10th Street and Stonewall, Oklahoma City, Oklahoma 73105.

V. Filmstrip--*Hospital Diagnostic Services.* Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

LABORATORY TESTS AND X-RAYS
UNIT III

INFORMATION SHEET

I. Terms and definitions

A. Bacteriological smear--Test that determines the type of bacteria present in a particular body system

Examples: Throat and nose culture, wound drainage

B. Blood chemistry--Test that evaluates a wide range of blood components

C. Casts–Fibrous material thrown off in various pathological conditions

D. Centrifuge--Device that spins test tubes at high speed, causing the heavier particles to settle to the bottom and the lighter liquid to move to the top

E. Differential count–Classification of the white blood cells into their various types

Examples: Neutrophils, basophils, eosinophils

F. Erythrocyte count--Estimated number of red blood cells in the body

G. Hematocrit--Estimate of the percentage of total blood volume as shown by the packed red blood cells after being centrifuged

H. Leukocyte count–Estimate of number of white blood cells in the body

I. Platelet count--Estimate of thrombocytes in body

(NOTE: Platelets are very important in the blood system as they are responsible for coagulation and blood clotting.)

J. pH--Degree of acidity or alkalinity of a substance

K. Sediment--Substance settling at the bottom of a liquid

L. Sensitivity tests--Method of determining the susceptibility of a patient's bacterial infection to the type of antibiotic to be used for treatment

M. Specific gravity--Weight of a substance when compared with an equal amount of water

INFORMATION SHEET

N. Titer--Amount of one substance that corresponds to, reacts with, or is equivalent to a stated quantity of another substance

(NOTE: This can be a serum titer, or an agglutination titer that measures specific substances indicating diseases of various types.)

O. Urinometer--Device for measuring specific gravity of urine

II. Common laboratory tests using blood specimens

A. Red blood cell count

B. White blood cell count and differential

C. Hemoglobin

(NOTE: This is to determine the amount of iron-containing pigment in red blood cells.)

D. Reticulocyte count

(NOTE: This test determines the amount of red blood cells in an immature state of development.)

E. Platelet count

F. Sedimentation rate

G. Coagulation time

H. Prothrombin time (*Pro time* or *PT*)

(NOTE: This test measures five different coagulation factors.)

I. SMA

(NOTE: The complete name for this test is the *Sequential Multiple Analyses* in chemistry. It analyzes specific elements found in the circulatory system.)

J. Agglutination test for infectious mononucleosis

K. Blood typing and cross match

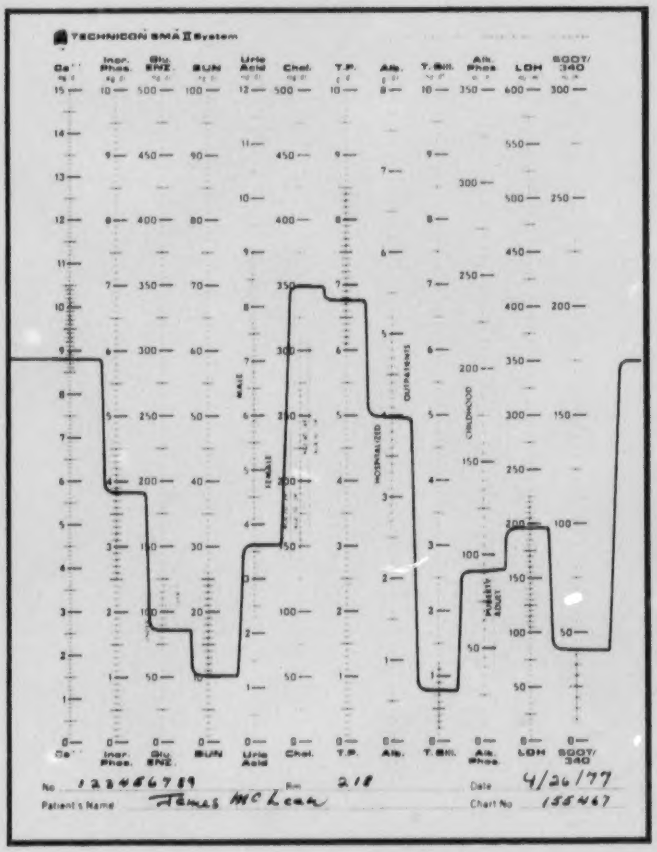
L. Serology

(NOTE: This is a basic test to determine if syphilis is present. Various tests such as the VDRL, RPR, or Wassermann are done to determine presence of syphilis.)

INFORMATION SHEET

III. Common elements tested in an SMA and the specific functions they evaluate

(NOTE: The name of the test will tell you how many elements are being evaluated, such as, SMA-12, SMA-16, SMA-18, or SMA-24.)



No 123456789 Rm 218 Date 4/26/77
Patient's Name James McLean Chart No 155467

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A. Calcium--Parathyroid disease, bone integrity

B. Phosphorus--Bone integrity

C. Glucose--Diabetes

D. Blood urea nitrogen (BUN)--Kidney function

E. Uric acid--Gout

INFORMATION SHEET

F. Cholesterol--Blood fats, arteriosclerosis

G. Total protein--General nutrition

H. Albumin--Liver and kidney function

I. Bilirubin--Liver function

J. Alkaline phosphatase--Bone and liver

K. Lactic dehydrogenase (LDH)--Cardiac

L. Serum glutamic-oxaloacetic transaminase--Cardiac

(NOTE: This test is commonly written as SGOT.)

IV. Components counted in a complete blood count

A. Red blood cells (RBC)

B. White blood cells (WBC)

C. Hemoglobin (Hb)

D. Differential

V. Normal values for men and women in different cell counts

(NOTE: Children normally may have a higher percentage of lymphocytes than adults. Their normal red blood cell count and hemoglobin is about the same as an adult woman.)

A. RBC

1. Men--4.6 to 6.2 million
2. Women--4.2 to 5.4 million

B. White blood cell count--Both sexes 5,000 to 10,000

C. Hemoglobin

1. Men--14 to 18 Gm/100 ml
2. Women--12 to 16 Gm/100 ml

D. Hematocrit

1. Men--40 to 50%
2. Women--37 to 47%

INFORMATION SHEET

VI. Common laboratory tests using urine specimens

A. Routine urine analysis

B. Occult blood

C. Casts

D. Chorionic gonadotropic hormone

(NOTE: This test is used to determine pregnancy.)

E. Bacteriological cultures

(NOTE: Many types of bacteria can attack the urinary system. To determine what treatment should be used, the bacteria has to be identified.)

VII. Tests performed in a routine urinalysis

A. Color

B. Appearance

Examples: Cloudy, clear, milky, smoky, cloudy with tissue

C. Reaction (pH)

(NOTE: Normal range is 4.5 to 7.5.)

D. Specific gravity

(NOTE: Normal range is 1.015 to 1.025 sp. gr.)

E. Sediment

F. Chemical exam

(NOTE: This test determines the presence of glucose, ketones, urobilinogen, protein, and nitrites in the urine.)

VIII. Safety factors to observe when X-rays are taken

A. Wear radiation protection badge when in X-ray room

(NOTE: This badge is capable of measuring the amount of exposure to the rays and periodically will be checked by the company to determine if the person is being overexposed.)

B. Use protecting screens if taking the X-rays or if accompanying patient to the X-ray area

(NOTE: Most rooms have screens to step behind when rays are on.)

INFORMATION SHEET

C. Wear lead aprons or gloves to protect yourself if you need to hold a patient's limb or help with a certain procedure

(NOTE: Body tissues, particularly of the reproductive system, skin and blood-producing organs can be damaged by rays and will never recover if overexposed.)

D. Place a protective apron or cover on patient to prevent exposure of rays to vulnerable areas that are not being examined

(NOTE: After assisting patient to undress, remove any metal materials, help them on to the table, provide a pillow and blanket if possible and reassure them about their X-ray. They will be frightened until you tell them what will happen as they are examined.)

(CAUTION: Question female patients concerning the possibility of pregnancy because X-rays are not usually done at this time.)

IX. Patient preparation for common laboratory tests and X-rays (Assignment Sheet #1)

(NOTE: Although you may not be doing these tests it will be your responsibility to explain the procedure to the patient and give instructions on what to do the night before and the day of the test. Do not expect just to give them a written explanation to follow. Be sure to explain and ask for any questions. The tests below are common to almost every laboratory and X-ray department, but the methods of preparation will differ according to physicians' preference and facilities' policies.)

A. Laboratory tests

1. Glucose tolerance test (GTT)

(NOTE: Test may be done over 3 to 5 hour period. Blood and urine specimens will be taken 1/2 hour after glucose is taken and each hour for the required time.)

a) Take nothing by mouth from midnight until time of test

(NOTE: A glucose preparation will be given to patient to drink at time of test.)

b) Do not eat any food during test

c) Do not smoke during test

d) Do not leave the area in which the test is being performed

(NOTE: If patient exercises it may affect the glucose level.)

e) Drink sips of water, if needed and allowed, during the test to make it easier to obtain urine specimens

INFORMATION SHEET

2. Two-hour postprandial glucose

    a. Instruct patient to eat a high-carbohydrate breakfast

    (NOTE: Some physicians and laboratories will determine the number of carbohydrates taken in to make test results more accurate.)

    b. Instruct patient to come to laboratory exactly two hours after meal has been taken

    (NOTE: Blood will only be taken once. The patient is always happy to hear this.)

3. SMA

    a. Take nothing to drink after midnight the night before and fast until the blood is drawn

    b. In an emergency, this test can be drawn if the patient has not fasted

B. X-rays

1. Upper GI or barium swallow

    a. Take nothing by mouth after midnight the night before the X-ray

    b. Report to the proper X-ray department the morning of the test

    c. A liquid oral barium preparation will be given to the patient and films will be taken as the liquid moves through the tract

    (NOTE: If a complete gastric series is ordered, a barium enema may follow the upper GI.)

2. Barium enema

    a. Take only liquids (clear) the afternoon and evening before the test

    (NOTE: Meal should consist only of water, juice or broth--no milk or milk products should be taken. Many physicians will order an exact amount of fluids to be taken.)

    b. An oral preparation will be given the day before the test to help evacuate the bowel; the patient should be told that they may have bowel actions and cramping in the abdomen that evening and possibly the morning before the test

INFORMATION SHEET

   c. Water may be taken until early in the morning the day of the test

   d. Report to the proper X-ray department

   e. A liquid preparation of barium will be instilled into the colon just as a regular enema solution would be given; films are taken as liquid moves through colon

3. Gallbladder

   a. Take bilopaque tablets (amount indicated) for one or two nights before the morning of the X-ray

   (NOTE: Be sure to ask the patient if he or she is allergic to iodine. If so, notify physician. The amount of tablets and days taken will vary, depending on the strength of the tablets.)

   b. Take only water after taking the pills the night before the X-ray

   c. Do not eat or drink on the morning of the X-ray

   d. Report to the proper X-ray department

4. Intravenous pyleogram

   (NOTE: This X-ray is taken of the urinary system as dye passes through. Be sure to ask if patient is allergic to iodine; if so, report to physician immediately.)

   a. Take a mild laxative the night before the X-ray

   b. Do not eat breakfast the morning of the exam

   c. Coffee, tea, juices, water may be taken prior to 7:00 a.m., but no milk or milk products

   d. Report to the proper X-ray department

LABORATORY TESTS AND X-RAYS
UNIT III

ASSIGNMENT SHEET #1--PREPARE A CARD FILE

NAME ______________________________ SCORE ______________

Because every institution uses different products and methods of preparing patients for laboratory tests and X-rays, you will need to be well informed so that you can prepare patients correctly. Using the information in this unit and information from the physician's office, clinic, laboratory, or X-ray department of hospital, collect instructions for each of the specific tests done in those departments. Use a 3 x 5 file card for each test, and write information concerning the type of exam and how to prepare for it. Tab your cards with "Laboratory" and "X-ray" indexes. This system will make it easy for you to be up-to-date.

Example:

Procedure: ______________________________
____
____

Instructions to patient: ______________________________
____
____

Diet: ______________________________
____
____

Pre-medications: ______________________________
____
____

Other instructions: ______________________________
____
____

LABORATORY TESTS AND X-RAYS
UNIT III

TEST

NAME ______________________________ SCORE ______________

1. Match terms associated with laboratory tests and X-rays to the correct definitions. Write the correct numbers in the blanks provided.

_____ a. Degree of acidity or alkalinity of a substance

_____ b. Weight of a substance when compared with an equal amount of water

_____ c. Device for measuring specific gravity of urine

_____ d. Substance settling at the bottom of a liquid

_____ e. Fibrous material thrown off in various pathological conditions

_____ f. Estimated number of red blood cells in the body

_____ g. Estimate of number of white blood cells in the body

_____ h. Classification of the white blood cells into their various types

_____ i. Estimate of thrombocytes in the body

_____ j. Estimate of the percentage of total blood volume as shown by the packed red blood cells after being centrifuged

_____ k. Device that spins test tubes at high speed, causing the heavier particles to settle to the bottom and the lighter liquid to move to the top

_____ l. Test that evaluates a wide range of blood components

_____ m. Test that determines the type of bacteria present in a particular body system

1. Bacteriological smear
2. Blood chemistry
3. Casts
4. Centrifuge
5. Differential count
6. Erythrocyte count
7. Hematocrit
8. Leukocyte count
9. Platelet count
10. pH
11. Sediment
12. Specific gravity
13. Urinometer
14. Titer
15. Sensitivity tests

______n. Method of determining the susceptibility of a patient's bacterial infection to the type of antibiotic to be used for treatment

______o. Amount of one substance that corresponds to, reacts with, or is equivalent to a stated quantity of another substance

2. Select from the following list common laboratory tests using blood specimens. Mark each correct answer with an "X."

______a. Hemoglobin

______b. Sedimentation rate

______c. Red blood cell count

______d. Urinalysis

______e. Chorionic gonadotropin

______f. Reticulocyte count

______g. Crystals

______h. Platelet count

______i. White blood cell count and differential

______j. Blood typing and cross match

______k. Casts

______l. Prothrombin time (*Pro time* or *PT*)

______m. Serology

______n. Coagulation time

______o. SMA

______p. Agglutination test for infectious mononucleosis

3. Match elements tested in an SMA to the specific functions they evaluate. Write the correct numbers in the blanks provided. (Some blanks will have more than one number.)

______a. Parathyroid disease, bone integrity

______b. Bone integrity

______c. Diabetes

______d. Kidney function

______e. Gout

______f. Blood fats, arteriosclerosis

______g. General nutrition

______h. Liver and kidney functions

______i. Liver function

______j. Bone and liver

______k. Cardiac

1. Albumin
2. Alkaline phosphatase
3. Bilirubin
4. Blood urea nitrogen (BUN)
5. Calcium
6. Cholestrol
7. Glucose
8. Serum glutamic-oxaloacetic transaminase (SGOT)
9. Lactic dehydrogenase (LDH)
10. Phosphorus
11. Total protein
12. Uric acid

4. Select from the list below components counted in a complete blood count. Mark each correct answer with an "X."

______a. Hemoglobin (Hb)

______b. *Pro time*

______c. pH

______d. White blood cells (WBC)

______e. Type and cross match

______f. Differential

______g. Blood titer

______h. Red blood cells (RBC)

5. Distinguish between normal values for men and women in different cell counts. Write a "M" before normal values for men, and a "W" before normal values for women in the blanks provided. (A blank may have more than one correct answer.)

______a. 14 to 18 Gm/100 ml (hemoglobin)

______b. 37 to 47% (hematocrit)

______c. 4.6 to 6.2 million (RBC)

______d. 40 to 50% (hematocrit)

______e. 5,000 to 10,000 (WBC)

______f. 4.2 to 5.4 million (RBC)

______g. 12 to 16 Gm/100 ml (hemoglobin)

6. List common laboratory tests using urine specimens.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

7. Select from the following list tests performed in a routine urinalysis. Mark each correct answer with an "X."

______a. Chemical exam

______b. Reaction (pH)

______c. *Pro time*

______d. Sediment

______e. Color

______f. Differential

______g. Serology

______h. Appearance

______i. Specific gravity

______j. HCG hormone

8. State safety factors to observe when X-rays are taken.

   a. ______

   b. ______

   c. ______

   d. ______

9. Describe patient preparation for common laboratory tests and X-rays.

   a. Laboratory tests

      1) Glucose tolerance test--______

      2) Two-hour postprandial glucose--______

      3) SMA--______

   b. X-rays

      1) Upper GI or barium swallow--______

      2) Barium enema--______

3) Gallbladder-- ____________________

4) Intravenous pyleogram-- ____________________

10. Prepare a card file.

(NOTE: If this activity has not been finished before the test, ask your instructor when it should be completed.)

LABORATORY TESTS AND X-RAYS
UNIT III

ANSWERS TO TEST

1. a. 10
   b. 12
   c. 13
   d. 11
   e. 3
   f. 6
   g. 8
   h. 5
   i. 9
   j. 7
   k. 4
   l. 2
   m. 1
   n. 15
   o. 14
2. a, b, c, f, h, i, j, l, m, n, o, p
3. a. 5
   b. 5, 10
   c. 7
   d. 1, 4
   e. 12
   f. 6
   g. 11
   h. 1
   i. 1, 3
   j. 2
   k. 8, 9
4. a, d, f, h
5. a. M
   b. W
   c. M
   d. M
   e. M, W
   f. W
   g. W
6. a. Routine urine analysis
   b. Occult blood
   c. Casts
   d. Chorionic gonadotropic hormone
   e. Bacteriological cultures

7. a, b, d, e, h, i

8. a. Wear radiation protection badge when in X-ray room
   - b. Use protecting screens if taking the X-rays or if accompanying patient to the X-ray area
   - c. Wear lead aprons or gloves to protect yourself if you need to hold a patient's limb or help with a certain procedure
   - d. Place a protective apron or cover on patient to prevent exposure of rays to vulnerable areas that are not being examined

9. Descriptions should include:
   - a. 1) a) Take nothing by mouth from midnight until time of test
       - b) Do not eat any food during test
       - c) Do not smoke during test
       - d) Do not leave the area in which the test is being performed
       - e) Drink sips of water, if needed and allowed, during the test to make it easier to obtain urine specimens
     - 2) a) Instruct patient to eat a high-carbohydrate breakfast
       - b) Instruct patient to come to laboratory exactly two hours after meal has been taken
     - 3) a) Take nothing to drink after midnight the night before and fast until the blood is drawn
       - b) In an emergency this test can be drawn if the patient has not fasted
   - b. 1) a) Take nothing by mouth after midnight the night before the X-ray
       - b) Report to the proper X-ray department the morning of the test
       - c) A liquid oral barium preparation will be given to the patient and films will be taken as the liquid moves through the tract
     - 2) Barium enema
       - a) Take only liquids (clear) the afternoon and evening before the test
       - b) An oral preparation will be given the day before the test to help evacuate the bowel; the patient should be told that they may have bowel actions and cramping in the abdomen that evening and possibly the morning before the test

c) Water may be taken until early in the morning the day of the test

d) Report to the proper X-ray department

e) A liquid preparation of barium will be instilled into the colon just as a regular enema solution would be given; films are taken as liquid moves through colon

3) a) Take bilopaque tablets (amount indicated) for one or two nights before the morning of the X-ray

b) Take only water after taking the pills the night before the X-ray

c) Do not eat or drink on the morning of the X-ray

d) Report to the proper X-ray department

4) a) Take a mild laxative the night before the X-ray

b) Do not eat breakfast the morning of the exam

c) Coffee, tea, juices, water may be taken prior to 7:00 a.m., but no milk or milk products

d) Report to the proper X-ray department

10. Evaluated to the satisfaction of the instructor

PHARMACOLOGY
UNIT IV

UNIT OBJECTIVE

After completion of this unit, the student should be able to apply knowledge of pharmacology to assist the physician in treatment of patients with drugs, and patient education. The student should also be able to identify various forms of drugs, their uses and actions, and care for all drugs safely in the medical office. This knowledge will be evidenced through completion of the assignment sheet and unit test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with pharmacology to the correct definitions.
2. List sources of drugs.
3. List purposes for which drugs are used.
4. Distinguish between types of names that a drug may have.
5. Match common classes of drugs to the correct definitions.
6. List sources of information concerning drugs.
7. Match laws and agencies to their purposes.
8. Match forms of drugs to the correct descriptions.
9. Distinguish between schedules of drugs.
10. Describe the registration, ordering, storing, and prescribing of controlled drugs.
11. Select from a list ethical responsibilities of the medical assistant when working with drugs.
12. List methods of storing drugs in the medical office.
13. Discuss the care of drug samples in the medical office.
14. Select from a list factors to consider when taking drug inventory and disposing of out-of-date drugs.
15. Identify information that should be on a prescription.
16. Write abbreviations or symbols pertaining to medications.
17. Use *Physician's Desk Reference*.

PHARMACOLOGY
UNIT IV

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and assignment sheets.

   C. Discuss unit and specific objectives.

   D. Discuss information and assignment sheets.

   E. Invite a pharmacist to speak to class about drugs, old and new, prescriptions, problems with forged and stolen pads, and how the medical assistant can discourage this practice.

   F. Write to pharmaceutical company or call detail person for any free drug literature.

   (NOTE: Many pharmaceutical companies have representatives that will be glad to bring equipment, films, and speak to class on drugs and their administration.)

   G. Collect various forms of drugs to demonstrate difference in capsules, tablets, suppositories, and other forms.

   H. Provide *PDR*'s for students to complete Assignment Sheet #1.

   (NOTE: Many physicians will give schools older copies of *PDR*'s as they receive new ones each year.)

   I. Discuss old folklore and types of home remedies used before drugs became more sophisticated.

   J. Take a field trip to a pharmacy, medical clinic, and doctor's office to see how they store and manage their drug supplies.

   K. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Assignment Sheet #1--Use *Physician's Desk Reference*

   D. Test

   E. Answers to test

III. Unit references:

A. Cooper, Marian G. and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

B. Rogers, Helen. *Nursing I: A Course of Study.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

C. Clayton, Thomas L., M.D., ed., *Taber's Cyclopedic Medical Dictionary.* Philadelphia: F.A. Davis Company, 1977.

D. *Physician's Desk Reference.* Medical Economics Company. Oradell, New Jersey: Litton Industries, Inc., 1980.

IV. Filmstrips:

A. *Drugs: From Research to Your Patient.* Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

B. *Bioavailability.* Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

(NOTE: This film is about forms of drugs and their uses.)

PHARMACOLOGY
UNIT IV

INFORMATION SHEET

I. Terms and definitions

A. Addiction--Physiologic or psychologic dependence on some agent with a tendency to increase its use

B. Administer--To give patient a drug by injection or by mouth; putting a drug into the body of a patient

C. Chemotherapy--Treatment of illness by chemical means (medication)

D. Dispense--To give or sell the patient a container holding a drug for later use

E. Dosage--Amount of medicine to be administered to a patient at one time

F. Drug--Medication; chemical or other substance intended to have a therapeutic effect

G. Drug addiction--Acquired dependence upon medications which stimulate or depress physiologic or mental activities

H. Drug misuse--Use of any substance which affects mood or behavior to the extent that it does physical, mental, or social harm

I. Habituation--Acquired tolerance from repeated use of a drug, with little or no tendency to increase dose

J. Lethal dose--Amount of medicine which causes death

K. Local effect--Effect limited to a part; not general

L. Pharmacist--Person licensed to prepare and dispense drugs

M. Pharmacology--Study of the actions of drugs on living organisms

N. *Pharmacopeia*--Book containing a selected list of medicinal preparations and their dosage forms; provides a description and standards of purity and strength for each drug listed

O. Pharmacy--Profession or place of preparing and dispensing drugs

P. Prescription--Written or verbal medication order

Q. Prescribe--Action of giving a written or verbal order to the pharmacy to be filled for the patient

R. Systemic effect--Generalized or affecting the entire body

INFORMATION SHEET

II. Sources of drugs

A. Animal

Example: Insulin from animal pancreas

B. Mineral

Examples: Calcium, sodium bicarbonate

C. Plant

Examples: Digitalis from purple foxglove; morphine or codeine from the white poppy

D. Synthetic or chemical

Examples: Antibiotics such as penicillin; synthetic steroids such as cortisone, prednisone

III. Purposes for which drugs are used

A. Diagnosis

Examples: Dyes for X-rays; skin tests

B. Treatment of symptoms

Example: Analgesics for pain

C. Treatment of disease or dysfunctions

Examples: Antibiotics; insulin for diabetes

D. Prevention of disease

Examples: Vaccines; gamma globulin

IV. Types of names that a drug may have

Examples: Generic and official name–tetracycline

Chemical name--tetracycline hydrochloride

Trade names--Achromycin®, Tetracyn®, Panmycin®

A. Generic

1. First letter not capitalized
2. Universally used
3. Given to the drug before the company that develops it makes it official

INFORMATION SHEET

B. Official
   1. May or may not be the same as the generic name
   2. First letter not capitalized
   3. Used for a drug in official publications

C. Chemical
   1. Exact chemical formula of the drug
   2. Meaningful chiefly to the chemist
   3. First letter not capitalized

D. Trade
   1. May also be called trademark or brand name
   2. First letter is capitalized
   3. Symbols TM or ® are used to the right of the name
   4. Makes pronunciation and spelling easier

V. Common classes of drugs

(NOTE: There are other classes of drugs but these are the more common ones.)

A. Analgesic--Relieves pain

B. Anesthetic--Produces loss of feeling

(NOTE: Anesthetic can be general, local, topical, or regional.)

C. Antacid--Neutralizes acids

D. Antibiotic--Destroys bacteria

(NOTE: An antibiotic that is capable of killing a variety of bacteria is known as a wide-spectrum antibiotic.)

E. Antidepressant--Elevates the mood and relieves depression

F. Antidiabetic--Used in treatment of diabetes

G. Antidote--Prevents or counteracts the action of a poison

H. Antihistamine--Reduces the production of histamine in the body

INFORMATION SHEET

I. Antispasmodic--Reduces the passing of impulses of autonomic nervous system; stops flow of secretions and gastric and bladder contractions

J. Cardiogenic--Acts directly on the heart

K. Cathartic--Promotes or speeds up emptying of bowels

L. Depressant--Produces sedation or sleep

M. Diuretic--Increases the output of urine

N. Emetic--Induces vomiting

O. Hallucinogen--Produces hallucinations

P. Hemostatic--Slows flow of blood

Q. Hormone--Produced by the endocrine glands

R. Hypnotic--Induces sleep

S. Narcotic--Produces sleep; relieves pain

T. Vasoconstrictor--Causes constriction of blood vessels

U. Vasodilator--Dilates blood vessels

V. Vitamin--Found in various foods; necessary for body function

(NOTE: Vitamins can be synthetically produced.)

VI. Sources of information concerning drugs

A. *United States Pharmacopeia* (USP)

B. National Formulary (NF)

C. *Physicians' Desk Reference* (PDR)

D. American Hospital Formulary Service

VII. Laws and agencies and their purposes

A. Pure Food Act--Listed eleven narcotic and habit-forming drugs; required labeling of any preparation containing these drugs; prohibited the making of false claims about medicines (1906)

B. Federal Food, Drug, and Cosmetic Act--Provided strict regulation of the manufacture, safety, effectiveness, sale, and use of drugs; amended several times (1938)

INFORMATION SHEET

C. Harrison Narcotic Act--Regulated the importation, manufacture, sale, and use of opium, cocaine, and all of their compounds and derivatives (1914)

D. Controlled Substance Act--Regulated the use of narcotics, amphetamines, amphetamine-like compounds, and barbiturate and narcotic drugs, as well as those drugs which have no accepted medical use incuding heroin, marijuana, and LSD (1970)

(NOTE: Extensive research is currently being conducted concerning the use of marijuana for treatment of various conditions. In these instances, permission is granted to use this substance for experimentation, under strict regulations.)

E. Food and Drug Administration--Enforces laws concerning food and drugs; receives and correlates reports from pharmaceutical firms and others concerning adverse effects of drugs

F. Public Health Service--Part of the Department of Health, Education, and Welfare; regulates the use of biologic products

G. Federal Trade Commission--Federal agency directly responsible to the president; has the power to suppress false or misleading advertising

VIII. Forms of drugs

A. Solids

1. Extract--Concentrated solid preparation of drugs made by dissolving a crude drug in a solvent, allowing the solution to evaporate, and forming the sediment into tablets or capsules
2. Powder--Medicinal preparation in fine particles
3. Pill--Drug shaped in small balls or ovals; may be coated to disguise the taste
4. Capsule--Small, cylindrical gelatin container filled with powder or granules
5. Tablet--Dried, powdered drug pressed into a flat disc
6. Suppository--Mixture of drugs in a firm base such as glyceride or vegetable fat which melts at body temperature
7. Ointment--Mixture of drugs in an oily base which spreads easily at body temperature
8. Lozenge--Flat disc containing a drug and a sweetening agent, usually sugar

INFORMATION SHEET

B. Liquids

1. Fluidextract--Concentrated liquid preparation made by dissolving a crude plant drug in an appropriate solvent

   (NOTE: Usually, one cc of fluidextract contains one gram of the drug.)

2. Tincture--Diluted alcoholic extract of drugs; strength varies, usually from ten to twenty percent
3. Spirit--Volatile preparation of drugs dissolved in alcohol
4. Syrup--Drug prepared in sugar and water solution
5. Elixir--Palatable preparation of drugs dissolved in a mixture of alcohol, sugar, and an aromatic
6. Suspension--Liquid mixture with ingredients which tend to separate
7. Milk--Bulky suspension of drug preparations in a solvent, usually water
8. Emulsion--Suspension of oily or fatty substances in water
9. Liniment--Mixture of drugs with soap, oil, water, or alcohol to be used for external application only
10. Lotion--Preparation of drugs suspended in an aqueous solution

IX. Schedules of drugs

(NOTE: Controlled substances must be kept in a secure place and availablity of these drugs must be carefully monitored. The MA must be aware of the types of drugs and which ones fall into categories according to strength and the likelihood of abuse.)

A. Schedule I

1. May not be prescribed; used for research only
2. Have high potential for abuse

   Examples: LSD, marijuana, heroin

B. Schedule II

1. Have accepted medical use but with severe restrictions

INFORMATION SHEET

2. Dispensed with written prescriptions that cannot be refilled

   (NOTE: Many patients will call in and want an order to refill a prescription. Unless the physician agrees and calls the order or writes another prescription this will not be possible.)

   Examples: Demerol, morphine, dilaudid

3. Have high potential for abuse

C. Schedule III

1. Have accepted medical use
2. May be prescribed in writing or orally with refills up to five times in 6 months
3. Have less potential for abuse

   Examples: Tylenol with codeine, Seconal, Nembutal

D. Schedule IV

1. Have accepted medical uses
2. Have less potential for abuse
3. May be prescribed in writing or orally with refills up to six times in six months

   Examples: Valium, Miltown, other tranquilizers

E. Schedule V

1. Have compounds consisting of limited quantities of narcotic drugs and nonnarcotic active ingredients
2. May be purchased over the counter
3. Have less potential for abuse

   Examples: Cough syrups containing codeine

X. Registration, ordering, storing, and prescribing of controlled drugs

A. Registration

1. Any physician who administers, dispenses or prescribes scheduled drugs must be registered with the Drug Enforcement Administration
2. Each physician is given a number that identifies him or her to suppliers and pharmacies
3. Registration must be renewed each year; the MA should be aware of this and make sure forms are filled out before expiration date

INFORMATION SHEET

B. Ordering

1. Any physician who orders and keeps any controlled substances must use a special form from the DEA
2. The MA must be sure the forms are filled out in triplicate, with one copy going to the DEA

C. Storing

1. Controlled substances should be kept in a locked area with the key in a safe place
2. If theft occurs, the regional office of the DEA and the local police department should be informed

D. Prescribing

1. If a physician *dispenses* a drug (narcotic) to a patient, he or she must keep a record, but a record does not need to be kept for *prescribing* a drug

   (NOTE: A record is not usually kept when samples are dispensed unless it is a controlled drug.)

2. Physicians' prescription pads should be kept in a safe place, and for extra precaution should be numbered consecutively for ease in recording

XI. Ethical responsibilities of the medical assistant when working with drugs

A. Should not administer medications until properly trained

B. Should be accountable for actions even though employer will be legally responsible

C. Should know limitations and act accordingly

D. Should not suggest or prescribe drugs

E. Must keep drug record accurately and honestly

F. Should be responsible and keep all controlled substances in a secure place

XII. Methods of storing drugs in the medical office

(NOTE: Some offices use a combination of two or three of these methods.)

A. Alphabetically

B. Classified by type of drug

Examples: Antibiotics, hormones, antihistamines

INFORMATION SHEET

C. Classified by form of drug

Examples: Oral, injectable, topical

D. Refrigeration

Examples: Most vaccines, penicillin, insulin

E. Locked cabinet

Examples: All controlled drugs

XIII. Care of drug samples in the medical office

(NOTE: Pharmaceutical detail persons will leave samples of new drugs or ones that they are promoting for physicians to use.)

A. Place in a container with label showing name of drug, how it is to be used, and expiration date

(NOTE: Many physicians will remove the drug from the original container and place it in envelopes or small boxes. It may be the MA's responsibility to label these containers correctly.)

B. Examine routinely to determine expiration date and condition before giving to patient

XIV. Factors to consider when taking drug inventory and disposing of out-of-date drugs

A. Check drug stock routinely, making sure that commonly-used drugs are restocked before supply is gone

B. Place new drugs to back of shelves and use drugs with closest expiration date

C. Clean shelves and refrigerator frequently

(NOTE: Check color and appearance of drugs.)

D. Label drugs clearly with all necessary information

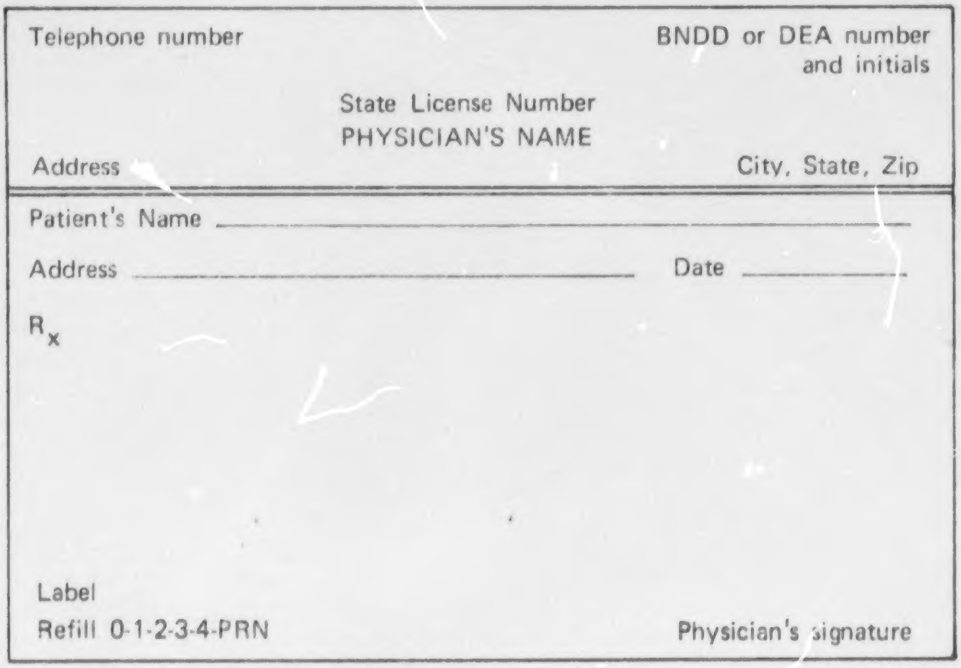
(NOTE: If label is torn or loose replace it; if a container is found without a label, or one that is upside down, dispose of contents properly.)

E. Dispose of out-of-date noncontrolled drugs by flushing down the toilet

(NOTE: Some drug companies will take back expired drugs.)

INFORMATION SHEET

XV. Information that should be on a prescription



Telephone number

BNDD or DEA number
and initials

State License Number
PHYSICIAN'S NAME

Address

City, State, Zip

Patient's Name ______________________________

Address ______________________ Date __________

R_x

Label

Refill 0-1-2-3-4-PRN

Physician's signature

(NOTE: This is only one type of prescription; become familiar with the type used in your office.)

A. Physician's telephone number

B. Physician's registration number with the Drug Enforcement Administration

(NOTE: This number will be shown on older prescription pads as BNDD and newer ones will show the number as DEA plus the next two initials that stand for the physician's area of specialty, the first letter of his/her last name and then the number.)

C. Physician's state license number

D. Physician's name

E. Physician's address

F. City, state and zip

G. Patient's name

H. Patient's address

INFORMATION SHEET

I. Date

J. R_x

(NOTE: This area should show the name of the drug, including form, strength, and what substance used if mixed. Full directions to the patient as to how much, how often, and what time of day if needed.)

Example: Valium 5 mg. po tid. Take one 5 mg. tab 3 x daily

K. Label

(NOTE: Physicians will sometimes check this area if they want the name of the drug on the prescription. Many pharmacists now put the name on the label of the physician does not specify that he or she does not want it on.)

L. Refill 0-1-2-3-4-PRN

M. Physician's signature

XVI. Abbreviations or symbols pertaining to medications

ABBREVIATION OR SYMBOL	MEANING
aa	of each
ac	before meals
ad	to
ad lib	as desired
amp	ampule
aq	water
aq dist	distilled water
bid	twice a day
bin	twice a night
cap	capsule
c	with
cc	cubic centimeter
comp	compound
DC	discontinue

INFORMATION SHEET

ABBREVIATION OR SYMBOL	MEANING
dr, ʒ	dram
elix	elixir
EC	enteric coated
ext	extract
Fe	iron
Fld	fluid
Gm	gram
gr	grain
gtt	drop
H, hypo	hypodermic
h	hour
hs	hours of sleep, bedtime
IM	intramuscular
IV	intravenous
L	liter
liq	liquid
m	minim
mg	milligram
mEq	milliequivalent
noc, n	night
non rep	do not repeat
ol	oil
O D	right eye
O U	each eye
O S	left eye

INFORMATION SHEET

ABBREVIATION OR SYMBOL	MEANING
om	every morning
o n	every night
os	mouth
oz, ℥	ounce
pc	after meals
per	through, by
p o, per os	by mouth
pil	pill
pre-op	preoperative
prn	when necessary
pulv	powder
q	every
q d	every day
q h	every hour
qid	four times a day
qod	every other day
q s	quantity sufficient
Rx	take
s̄	without
sol	solution
sp	spirit
ss	one-half
stat	at once
syr	syrup
tab	tablet

INFORMATION SHEET

ABBREVIATION OR SYMBOL	MEANING
tid	three times a day
tin	three times a night
tr, tinc	tincture
u, U	unit
ung	ointment
vin	wine
I	one
II	two
III	three
IV	four
V	five
VI	six
VII	seven
VIII	eight
IX	nine
X	ten

PHARMACOLOGY
UNIT IV

ASSIGNMENT SHEET #1--USE *PHYSICANS' DESK REFERENCE*

NAME ______________________ SCORE ____________

A drug should never be given unless the person who administers the substance knows important information. The medical assistant many times will be trained to give medications and will be responsibile for his or her actions. If you are giving a medication you should know the following information: Name of the drug, correct dosage, what it is used for, and any side effects that may follow the use of the drug. The *Physicians' Desk Reference* is one good source of information. Become familiar with its use so that you can turn to the correct page quickly and find needed information. The *PDR* is color-coded for ease in use. Using the *PDR* provided by your instructor, select a drug in each class and look up information that you would need.

Examples: Tranquilizer--Valium

Antispasmodics--Combid

BARBITURATES

Name of drug: ______________________

Correct dosage: ______________________

What it is used for: ______________________

Side effects: ______________________

ANTIBIOTICS

Name of drug: ______________________

Correct dosage: ______________________

What it is used for: ______________________

Side effects: ______________________

ASSIGNMENT SHEET #1

ANTACIDS

Name of drug: ______________________________

Correct dosage: ______________________________

What it is used for: ______________________________

Side effects: ______________________________

____

____

____

ANTIHISTAMINES

Name of drug: ______________________________

Correct dosage: ______________________________

What it is used for: ______________________________

Side effects: ______________________________

____

____

____

NARCOTICS

Name of drug: ______________________________

Correct dosage: ______________________________

What it is used for: ______________________________

Side effects: ______________________________

____

____

____

ASSIGNMENT SHEET #1

DIURETICS

Name of drug: ____________________

Correct dosage: ____________________

What it is used for: ____________________

Side effects: ____________________

____

____

____

ANTIPYRETICS

Name of drug: ____________________

Correct dosage: ____________________

What it is used for: ____________________

Side effects: ____________________

____

____

____

ANTIDEPRESSANTS

Name of drug: ____________________

Correct dosage: ____________________

What it is used for: ____________________

Side effects: ____________________

____

____

____

PHARMACOLOGY
UNIT IV

TEST

NAME________________________________ SCORE________________

1. Match terms associated with pharmacology to the correct definitions. Write the correct numbers in the blanks provided.

_____a. Amount of medicine to be administered to a patient at one time

_____b. Amount of medicine which causes death

_____c. Person licensed to prepare and dispense drugs

_____d. Physiologic or psychologic dependence on some agent with a tendency to increase its use

_____e. Action of giving a written or verbal order to the pharmacy to be filled for the patient

_____f. Study of the actions of drugs on living organisms

_____g. Profession or place of preparing and dispensing drugs

_____h. Medication; chemical or other substance intended to have a therapeutic effect

_____i. Use of any substance which affects mood or behavior to the extent that it does physical, mental, or social harm

_____j. Written or verbal medication order

_____k. Treatment of illness by chemical means (medication)

_____l. Book containing a selected list of medicinal preparations and their dosage forms; provides a description and standards of purity and strength for each drug listed

_____m. Acquired tolerance from repeated use of a drug, with little or no tendency to increase dose

1. Addiction
2. Prescribe
3. Chemotherapy
4. *Pharmacopeia*
5. Dosage
6. Drug
7. Pharmacy
8. Drug misuse
9. Pharmacology
10. Lethal dose
11. Prescription
12. Pharmacist
13. Habituation

______n. Acquired dependence upon medications which stimulate or depress physiologic or mental activities

______o. Effect limited to a part; not general

______p. To give patient a drug by injection or by mouth; putting a drug into the body of a patient

______q. Generalized or affecting the whole body

______r. To give or sell the patient a container holding a drug for later use

14. Dispense
15. Drug addiction
16. Local effect
17. Administer
18. Systemic effect

2. List sources of drugs.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

3. List purposes for which drugs are used.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

4. Distinguish between types of names that a drug may have. Write a "G" before characteristics of generic name, an "O" before characteristics of an official name, a "C" before characteristics of a chemical name, and a "T" before characteristics of a trade name. (Some blanks may have more than one letter.)

______a. May or may not be the same as the generic name

______b. May also be called trademark or brand name

______c. Universally used

______d. Exact chemical formula of the drug

______e. Makes pronunciation and spelling easier

______f. Used for a drug in official publications

______g. Given to the drug before the company that develops it makes it official

______h. First letter not capitalized

______i. Meaningful chiefly to the chemist

______j. Symbols TM or ® are used to the right of the name

______k. First letter is capitalized

5. Match common classes of drugs to the correct definitions. Write the correct numbers in the blanks provided.

______a. Induces vomiting

______b. Induces sleep

______c. Produces loss of feeling

______d. Dilates blood vessels

______e. Promotes or speeds up emptying of bowels

______f. Elevates the mood and relieves depression

______g. Found in various foods; necessary for body functions

______h. Slows flow of blood

______i. Used in treatment of diabetes

______j. Relieves pain

______k. Destroys bacteria

______l. Increases the output of urine

______m. Produces sleep; relieves pain

______n. Reduces the production of histamine in the body

______o. Neutralizes acids

______p. Produces hallucinations

______q. Prevents or counteracts the action of a poison

______r. Reduces the passing of impulses of autonomic nervous system; stops flow of secretions and gastric and bladder contractions

______s. Acts directly on the heart

______t. Produces sedation or sleep

______u. Produced by the endocrine glands

______v. Causes constriction of blood vessels

1. Analgesic
2. Anesthetic
3. Antacid
4. Antibiotic
5. Antidepressant
6. Antidiabetic
7. Antidote
8. Antihistamine
9. Antispasmodic
10. Cardiogenic
11. Cathartic
12. Depressant
13. Diuretic
14. Emetic
15. Hallucinogen
16. Hemostatic
17. Hormone
18. Hypnotic
19. Narcotic
20. Vasoconstrictor
21. Vasodilator
22. Vitamin

6. List sources of information concerning drugs.

a. ____________________

b. ____________________

c. ____________________

d. ____________________

7. Match laws and agencies to their purposes. Place the correct numbers in the blanks provided.

_____a. Regulated the importation, manufacture, sale, and use of opium, cocaine, and all of their compounds and derivatives (1914)

_____b. Federal agency directly responsible to the president; has the power to suppress false or misleading advertising

_____c. Provided strict regulation of the manufacture, safety, effectiveness, sale, and use of drugs; amended several times (1938)

_____d. Listed eleven narcotic and habit-forming drugs; required labeling of any preparation containing these drugs; prohibited the making of false claims about medicines (1906)

_____e. Enforces laws concerning food and drugs; receives and correlates reports from pharmaceutical firms and others concerning adverse effects of drugs

_____f. Regulated the use of narcotics, amphetamines, amphetamine-like compounds, and barbiturate and narcotic drugs, as well as those drugs which have no accepted medical use including heroin, marijuana, and LSD (1970)

_____g. Part of the Department of Health, Education, and Welfare; regulates the use of biologic products

1. Pure Food Act
2. Federal Food, Drug, and Cosmetic Act
3. Harrison Narcotic Act
4. Controlled Substance Act
5. Food and Drug Administration
6. Public Health Service
7. Federal Trade Commission

8. Match forms of drugs to the correct descriptions. Place the correct numbers in the blanks provided.

SOLIDS

______a. Small, cylindrical gelatin container filled with powder or granules

______b. Flat disc containing a drug and a sweetening agent, usually sugar

______c. Medicinal preparation in fine particles

______d. Mixture of drugs in a firm base such as glyceride or vegetable fat which melts at body temperature

______e. Drug shaped in small balls or ovals; may be coated to disguise the taste

______f. Concentrated solid preparation of drugs made by dissolving a crude drug in a solvent, allowing the solution to evaporate, and forming the sediment into tablets or capsules

______g. Mixture of drugs in an oily base which spreads easily at body temperatures

______h. Dried, powdered drug pressed into a flat disc

1. Extract
2. Powder
3. Pill
4. Capsule
5. Tablet
6. Suppository
7. Ointment
8. Lozenge

LIQUIDS

______a. Suspension of oily or fatty substances in water

______b. Volatile preparation of drugs dissolved in alcohol

______c. Bulky suspension of drug preparations in a solvent, usually water

______d. Palatable preparation of drugs dissolved in a mixture of alcohol, sugar, and an aromatic

______e. Diluted alcoholic extract of drugs; strength varies, usually from ten to twenty percent

______f. Mixture of drugs with soap, oil, water, or alcohol to be used for external application only

______g. Concentrated liquid preparation made by dissolving a crude plant drug in an appropriate solvent

1. Fluidextract
2. Tincture
3. Spirit
4. Syrup
5. Elixir
6. Suspension
7. Milk
8. Emulsion
9. Liniment
10. Lotion

_____h. Drug prepared in sugar and water solution

_____i. Liquid mixture with ingredients which tend to separate

_____j. Preparation of drugs suspended in an aqueous solution

9. Distinguish between schedules of drugs. Write a "1" before descriptions of Schedule I drugs, a "2" before Schedule II drugs, a "3" before Schedule III drugs, a "4" before Schedule IV drugs, and a "5" before Schedule V drugs. (A blank may have more than one correct answer.)

_____a. Dispensed with written prescriptions that cannot be refilled

_____b. May be purchased over the counter

_____c. May be prescribed in writing or orally with refills up to five times in six months

_____d. May not be prescribed; used for research only

_____e. Have less potential for abuse

_____f. Have compounds consisting of limited quantities of narcotic drugs and nonnarcotic active ingredients

_____g. Have high potential for abuse

_____h. Have accepted medical use but with severe restrictions

_____i. May be prescribed in writing or orally with refills up to six times in six months

10. Describe the registration, ordering, storing, and prescribing of controlled drugs.

a. Registration-- ____

____

____

____

____

____

____

____

b. Ordering--____

____

____

____

c. Storing--____

____

____

____

d. Prescribing--____

____

____

____

11. Select from the following list ethical responsibilities of the medical assistant when working with drugs. Mark each correct answer with an "X."

_____a. Should not suggest or prescribe drugs

_____b. Should be accountable for actions even though employer will be legally responsible

_____c. Should destroy samples when overstocked

_____d. Should be responsible and keep all controlled substances in a secure place

_____e. Can authorize refills at pharmacy

_____f. Should not administer medications until properly trained

_____g. Must keep drug record accurately and honestly

_____h. Should know limitations and act accordingly

12. List methods of storing drugs in the medical office.

a. ____

b. ____

c. ____

d. ____

e. ____

13. Discuss the care of drug samples in the medical office.

____

____

____

____

____

14. Select from the following list factors to consider when taking drug inventory and disposing of out-of-date drugs. Mark each correct answer with an "X."

______a. Label drugs clearly with all necessary information

______b. Clean shelves and refrigerator frequently

______c. Donate out-of-date drugs to free clinics

______d. Place new drugs to back of shelves and use drugs with closest expiration date

______e. Check drug stock routinely, making sure that commonly-used drugs are restocked before supply is gone

______f. Check all drugs for expiration date, except those refrigerated

______g. Dispose of out-of-date noncontrolled drugs by flushing down the toilet

15. Identify information that should be on a prescription. Write the correct information in the blanks provided.

a. ____________________ b. ____________________

c. ____________________

d. ____________________

e. ____________________ f. ____________________

---

g. ____

h. ____________________ i. ____________________

j. ____________

k. ____________________

l. ____________________ m. ____________________

Refill 0-1-2-3-4-PRN
Patient's name
Physician's telephone number
Patient's address
Physician's name
R_x
Physician's signature

Date
Physician's state license number
Physician's address
City, State, Zip
Label
Physician's registration number with the Drug Enforcement Administration

16. Write abbreviations and/or symbols pertaining to medications.

a. hour ____________________
b. hours of sleep, bedtime ________
c. intramuscular ____________
d. intravenous ______________
e. liter ____________________
f. liquid ___________________
g. minim ___________________
h. milligram _________________
i. milliequivalent ___________
j. night ____________________
k. do not repeat ____________
l. oil ______________________
m. right eye ________________
n. each eye ________________
o. left eye _________________
p. every morning ____________
q. every night ______________
r. mouth ___________________
s. ounce ___________________
t. after meals _______________
u. through, by ______________
v. by mouth ________________
w. pill _____________________
x. preoperative ______________
y. when necessary ___________

z. of each _________________
aa. before meals ____________
bb. to ____________________
cc. as desired ______________
dd. ampule ________________
ee. water _________________
ff. distilled water ___________
gg. twice a day _____________
hh. twice a night ____________
ii. capsule ________________
jj. with ___________________
kk. cubic centimeter _________
ll. compound ______________
mm. discontinue ____________
nn. dram __________________
oo. elixir _________________
pp. enteric coated __________
qq. extract ________________
rr. iron ___________________
ss. fluid __________________
tt. gram __________________
uu. grain __________________
vv. drop __________________
ww. hypodermic ____________
xx. powder ________________

yy. every ____________________

zz. every day ________________

aaa. every hour ______________

bbb. four times a day ___________

ccc. every other day ____________

ddd. quantity sufficient _________

eee. take ____________________

fff. without __________________

ggg. solution _________________

hhh. spirit ___________________

iii. one-half __________________

jjj. at once __________________

kkk. syrup ___________________

lll. tablet ___________________

mmm. three times a day _________

nnn. three times a night ________

ooo. tincture _________________

ppp. unit ____________________

qqq. ointment ________________

rrr. wine ____________________

17. Use *Physicians' Desk Reference.*

(NOTE: If this activity has not been finished before the test, ask your instructor when it should be completed.)

PHARMACOLOGY
UNIT IV

ANSWERS TO TEST

1. a. 5
   b. 10
   c. 12
   d. 1
   e. 2
   f. 9
   g. 7
   h. 6
   i. 8
   j. 11
   k. 3
   l. 4
   m. 13
   n. 15
   o. 16
   p. 17
   q. 18
   r. 14

2. a. Animal
   b. Mineral
   c. Plant
   d. Synthetic or chemical

3. a. Diagnosis
   b. Treatment of symptoms
   c. Treatment of disease or dysfunctions
   d. Prevention of disease

4. a. O
   b. T
   c. G
   d. C
   e. T
   f. O
   g. G
   h. G,O,C
   i. C
   j. T
   k. T

5. a. 14
b. 18
c. 2
d. 21
e. 11
f. 5
g. 22
h. 16
i. 6
j. 1
k. 4
l. 13
m. 19
n. 8
o. 3
p. 15
q. 7
r. 9
s. 10
t. 12
u. 17
v. 20

6. a. *United States Pharmacopeia* (USP)
b. National Formulary (NF)
c. *Physicians' Desk Reference* (PDR)
d. American Hospital Formulary Service

7. a. 3
b. 7
c. 2
d. 1
e. 5
f. 4
g. 6

8. SOLIDS
a. 4
b. 8
c. 2
d. 6
e. 3
f. 1
g. 7
h. 5

LIQUIDS
a. 8
b. 3
c. 7
d. 5
e. 2
f. 9
g. 1
h. 4
i. 6
j. 10.

9. a. 2
   b. 5
   c. 3
   d. 1
   e. 3,4,5
   f. 5
   g. 1,2
   h. 2
   i. 4

10. Descriptions should include:

    a. 1) Any physician who administers, dispenses or prescribes scheduled drugs must be registered with the Drug Enforcement Administration

       2) Each physician is given a number that identifies him or her to suppliers and pharmacies

       3) Registration must be renewed each year; the MA should be aware of this and make sure forms are filled out before expiration date

    b. 1) Any physician who orders and keeps any controlled substances must use a special form from the DEA

       2) The MA must be sure the forms are filled out in triplicate, with one copy going to the DEA

    c. 1) Controlled substances should be kept in a locked area with the key in a safe place

       2) If theft occurs, the regional office of the DEA and the local police department should be informed

    d. 1) If a physician *dispenses* a drug (narcotic) to a patient, he or she must keep a record, but a record does not need to be kept for *prescribing* a drug

       2) Physicians' prescription pads should be kept in a safe place, and for extra precaution should be numbered consecutively for ease in recording

11. a, b, d, f, g, h

12. a. Alphabetically

    b. Classified by type of drug

    c. Classified by form of drug

    d. Refrigeration

    e. Locked cabinet

13. Discussion should include:

    a. Place in a container with label showing name of drug, how it is to be used, and expiration date

    b. Examine routinely to determine expiration date and condition before giving to patient

14. a, b, d, e, g

15. a. Physician's telephone number
    b. Physician's registration number with the Drug Enforcement Administration
    c. Physician's state license number
    d. Physician's name
    e. Physician's address
    f. City, state, zip
    g. Patient's name
    h. Patient's address
    i. Date
    j. R_x
    k. Label
    l. Refill 0-1-2-3-4-PRN
    m. Physician's signature

16. a. h
    b. hs
    c. IM
    d. IV
    e. L
    f. liq
    g. m
    h. mg
    i. mEq
    j. noc, n
    k. non rep
    l. ol
    m. O D
    n. O U
    o. O S
    p. om
    q. o n
    r. os
    s. oz, ʒ
    t. pc
    u. per
    v. p o, per os
    w. pil
    x. pre-op
    y. prn
    z. aa
    aa. ac
    bb. ad
    cc. ad lib
    dd. amp
    ee. aq
    ff. aq dist
    gg. bid
    hh. bin
    ii. cap
    jj. c
    kk. cc
    ll. comp
    mm. DC
    nn. dr, ʒ
    oo. elix
    pp. EC
    qq. ext
    rr. Fe
    ss. Fld
    tt. Gm
    uu. gr
    vv. gtt
    ww. H, hypo
    xx. pulv
    yy. q
    zz. q d
    aaa. q h
    bbb. qid
    ccc. qod
    ddd. q s
    eee. Rx
    fff. $\bar{s}$
    ggg. sol
    hhh. sp
    iii. ss
    jjj. stat
    kkk. syr
    lll. tab
    mmm. tid
    nnn. tin
    ooo. tr, tinc
    ppp. u, U
    qqq. ung
    rrr. vin

17. Evaluated to the satisfaction of the instructor

ADMINISTRATION OF MEDICATIONS
UNIT V

UNIT OBJECTIVE

After completion of this unit, the student should be able to administer medications effectively and safely. The student should also be able to use various equipment needed to give injections for subcutaneous, intradermal, and intramuscular medicine. This knowledge will be evidenced by completion of job sheets and unit test with a minimum of 100 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with the administration of medications to the correct definitions.
2. List the five "rights" of administering medications.
3. Select from a list safety measures to observe when giving medications.
4. Distinguish between systems of measurement.
5. Write Apothecaries' symbols of dry weight and liquid volume.
6. Match metric prefixes to the correct values.
7. Write abbreviations used in measuring systems.
8. Distinguish between symbols used in measuring systems.
9. Complete a chart on approximate equivalent measures of weight and volume.
10. Identify types of syringes.
11. Describe uses of components of a syringe.
12. Discuss needles and their use.
13. Select from a list factors affecting selection of syringes and needles.
14. Label areas of the body that may be used for various injections.
15. Demonstrate the ability to:
    a. Use a syringe.
    b. Prepare an injection from a vial and an ampule.
    c. Use a cartridge syringe.

ADMINISTRATION OF MEDICATIONS
UNIT V

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information and job sheets.

   C. Make transparencies.

   D. Discuss unit and specific objectives.

   E. Discuss information sheet.

   F. Write or call pharmaceutical representatives for literature, films, and equipment sold by their companies for demonstration purposes.

   (NOTE: Many of these people are happy to have the opportunity for demonstrating their equipment and will be most receptive to your invitation. Ask one of the physicians to give your name, address, or phone number to the detail person who comes to the office if you do not know any.)

   G. Provide the equipment and the opportunity to practice the job sheets.

   (NOTE: If your school has a policy that students will not practice on other students, an alternative choice can be made. Either use oranges, rolled up towels, or washcloths to practice injections. Students can use other students to identify areas that will be used, but when the time comes for the injection, substitute a rolled up towel. It has the feeling of skin and tissue as the needle pierces the material.)

   H. Use model patients or injectable arm and hip models to practice injections.

   I. Ask your doctor's office to save old vials (empty) for students to practice with.

   J. Give test.

II. Instructional materials:

   A. Objective sheet

   B. Information sheet

   C. Transparency masters

      1. TM 1--Preparation of Medication

      2. TM 2--Apothecaries' Units

3. TM 3--Apothecaries', Metric, and Household Units
4. TM 4--Apothecaries', Metric and Household Units (Continued)
5. TM 5--Apothecaries', Metric and Household Units (Continued)
6. TM 6--Components of a Syringe
7. TM 7--Syringe Parts To Be Kept Sterile
8. TM 8--Needles
9. TM 9--Subcutaneous or Hypodermic Injection
10. TM 10--Intradermal Injection
11. TM 11--Intramuscular Injection

D. Job sheets

1. Job Sheet #1--Use a Syringe
2. Job Sheet #2--Prepare an Injection From a Vial and an Ampule
3. Job Sheet #3--Use a Cartridge Syringe
4. Job Sheet #4--Prepare Insulin for Injection
5. Job Sheet #5--Locate Intramuscular Injection Sites
6. Job Sheet #6--Administer an Injection

E. Test

F. Answers to test

III. Unit references:

A. Cooper, Marian, and Bredow, Miriam. *The Medical Assistant.* New York: McGraw-Hill Book Company, 1978.

B. Rogers, Helen. *Nursing II.* Stillwater: Oklahoma State Department of Vocational and Technical Education/Curriculum and Instructional Materials Center, 1974.

IV. Filmstrips:

(NOTE: The following filmstrips are available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.)

A. *Instramuscular and Subcutaneous Injections.*

B. *Tuberculosis Skin Testing.*

C. *The Metric System.*

D. *Apothecary Measurements.*

E. *Household Measurements.*

ADMINISTRATION OF MEDICATIONS
UNIT V

INFORMATION SHEET

I. Terms and definitions

A. Aspirate--Withdraw fluids and/or gases from a cavity

B. Barrel--Outer cylinder of a syringe

C. Bevel--Angle of a surface; angle of the point of an injection needle

D. Gauge--Diameter of needle

E. Injection--Introduction of fluid substance into body, usually by means of a syringe or other device connected to a hollow needle

F. Insulin--Active main secretion of the islands of Langerhans in the pancreas; hormone essential for metabolism of carbohydrates and fats

(NOTE: In diabetes mellitus insulin must be given if pancreas is not furnishing this hormone. Insulin comes in many forms and is made from animal pancreases.)

G. Intradermal--Within the skin

H. Intramuscular--Within the muscle

I. Lumen--Space or channel through a needle

J. Plunger--Sliding inner portion of a syringe

K. Subcutaneous--Beneath the skin

L. Wheal--Suddenly-formed elevation of the skin surface

II. Five "rights" of administering medications

A. Right patient

B. Right medication

C. Right amount

D. Right method

E. Right time

INFORMATION SHEET

III. Safety measures to observe when giving medications (Transparency 1)

- A. Give only the medications which you prepare
- B. Always read medication label three times
  - 1. Before taking container from the shelf
  - 2. Before preparing, check chart order
  - 3. When returning the container to the shelf
- C. Never use an unlabeled bottle
- D. Know what the medication is and why it is being given
- E. Do not combine two partially filled containers of like medications
- F. Make accurate, exact measurements of medications
- G. Know the adverse reactions of medications
- H. Never return medicine to a container after pouring it or removing from container

IV. Systems of measurement (Transparencies 2, 3, 4, and 5)

- A. Apothecaries'
  - 1. Based on weights and volumes of simple items such as a grain of wheat, a small stone, or a container of liquid; began in ancient Greek and Roman times
  - 2. Used by the British and Americans
  - 3. Uses symbols or abbreviations and Roman numerals for written measurements of medications

    Examples: One and one-half drams is written ʒ iss

    Three ounces is written ℥ iii
- B. Metric
  - 1. Invented by the French in the late eighteenth century
  - 2. Based on decimal system, using units and multiples of ten

INFORMATION SHEET

3. Uses abbreviations and Arabic numerals for written measurements of medication

   Examples: Ten grams is written 10 Gm

   One thousand milliliters or cubic centimeters is written 1,000 ml or cc

C. Household

1. Uses common utensils when medications are given

   Examples: Teaspoons, tablespoons, measuring cups

2. Should be used only when other measurements are not readily available because it is approximate

3. Enables medical assistant to give instructions to patient or parent if either of other two systems are not understood

V. Apothecaries' symbols of dry weight and liquid volume (Transparency 2)

A. Dry weight

1. 60 grains = 1 dr
2. 8 drams = 1 oz
3. 12 ounces = 1 pound, pd, or lb

B. Liquid volume

1. 60 minims = 1 fluidram
2. 8 drams = 1 fluid ounce
3. 16 ounces = 1 pint
4. 2 pints = 1 quart
5. 4 quarts = 1 gallon

VI. Values of metric prefixes

A. Micro--One-millionth 0.000001

B. Milli--One-thousandth 0.001

C. Centi--One-hundredth 0.01

INFORMATION SHEET

D.	Deci--One tenth	0.1
E.	Unit--One	1.0
F.	Deka or deca--Ten	10.0
G.	Hecto--One hundred	100.0
H.	Kilo--One thousand	1000.0

VII. Abbreviations used in measuring systems (Transparencies 3, 4, and 5)

A. Gram--Gm

(NOTE: 1,000 grams = 1 kilogram.)

B. Cubic centimeter--cc

(NOTE: 1,000 cubic centimeters = 1 liter.)

C. Liter--L

(NOTE: 1,000 milliliters = 1 liter.)

D. Milligram--mg

(NOTE: 1,000 milligrams = 1 gram.)

E. Microgram--mcg

F. Kilogram--kg

G. Pound--pd or lb

H. Minim--m

I. Pint--pt

J. Quart--qt

K. Gallon--gal

L. Drop--gt

(NOTE: The plural abbreviation is gtt.)

M. Teaspoon--t or tsp

(NOTE: 60 gtt = 1 tsp.)

N. Tablespoon--T or tbsp

(NOTE: 3 tsp. = 1 tbsp.)

INFORMATION SHEET

O. Measuring cup--c

P. Grain--gr

Q. Dram--dr or ʒ

R. Ounce--oz or ℥

(NOTE: 6 oz = 1 teacupful.)

VIII. Symbols used in measuring systems

A. Apothecaries'

1. Grain
2. Dram
3. Ounce
4. Pound
5. Minim
6. Pint
7. Quart
8. Gallon

B. Metric

1. Gram
2. Cubic centimeter
3. Liter
4. Milligram
5. Microgram
6. Kilogram

C. Household

1. Teaspoon
2. Tablespoon
3. Drop
4. Cup (measuring)

INFORMATION SHEET

IX. Approximate equivalent measures of weight and volume

Weight

(NOTE: A measure of weight, such as a gram or a pound, indicates how heavy an item is. It is used for solid or dry measure.)

METRIC	APOTHECARIES'	HOUSEHOLD
0.1 Gm	1 1/2 gr	--
1 Gm	15 gr	1/4 tsp
4 Gm	1 dr	1 tsp
30 Gm	1 oz	8 tsp
60 mg	1 gr	--
15 mg	1/4 gr	--
10 mg	1/6 gr	--
0.4 mg	1/150 gr	--
1.0 kg	--	2.2 lb

Volume

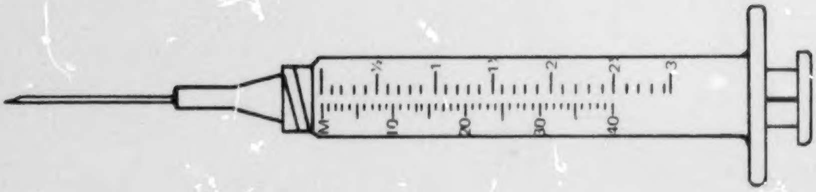
(NOTE: A measure of volume, such as a cubic centimeter or a pint, indicates how much space an item occupies. It is used for liquid measure.)

METRIC	APOTHECARIES'	HOUSEHOLD
1 cc	15 m	15 gtt
4 cc	60 m/1 dr	60 gtt/1 tsp
15 cc	1/2 oz	3 tsp/1tbsp/1/2 oz
30 cc	8 dr/1 oz	6 tsp/2 tbsp
240 to 250 cc	8 oz	1 glassful
500 cc	1 pt	2 measuring cups
1000 cc/1 L	1 qt	4 measuring cups

INFORMATION SHEET

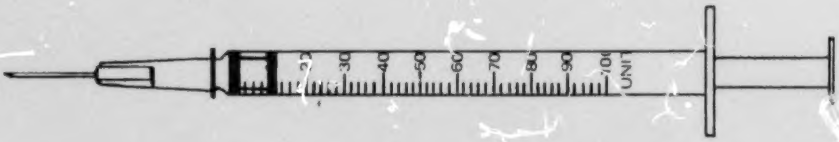
X. Types of syringes

A. Standard

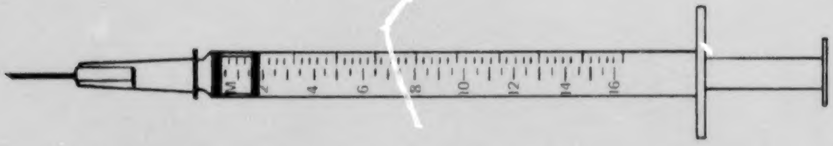

½
1
1½
2
2½
3
M
10
20
30
40

B. Insulin

(NOTE: The discontinuing of U40 and U80 insulin will, hopefully, eliminate the use of special syringes. The use of U100 insulin will become universal, but you may find U40 and U80 insulin still being used in some areas until this happens; just be sure to use the appropriate syringe.)

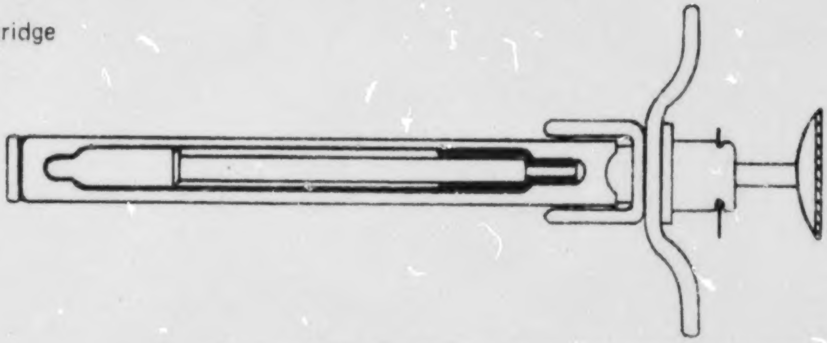

20
30
40
50
60
70
80
90
100
UNIT

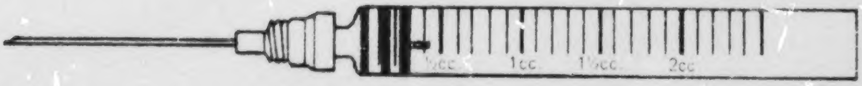
C. Tuberculin


M
2
4
6
8
10
12
14
16

INFORMATION SHEET

D. Cartridge





XI. Uses of components of a syringe (Transparencies 6 and 7)

A. Tip or hub--Needle fastens on this area; must be kept sterile

B. Barrel--Medication is drawn into this area; inside must be kept sterile

C. Plunger--Pushes medication from the syringe through the needle into the area being medicated; area that goes inside barrel must be kept sterile

D. Scale or calibrations--Markings on barrel that measure the amount of medication drawn up

XII. Needles and their use (Transparency 8)

A. Sizes range from 16 to 27 gauge

(NOTE: Remember, that the bigger the number, the smaller the needle.)

1. Smaller gauge needles are used for intradermal and subcutaneous injections

2. Larger gauges are used for intramuscular, intravenous and heavier substances in oil base

B. Length ranges from 5/8 inch to 2 inches

(NOTE: Naturally, the deeper the medication needs to go into the tissues the longer the needle must be.)

A. Usually 5/8-inch needles are used for subcutaneous and intradermal injections

B. Longer needles are used for muscular and joint injections

INFORMATION SHEET

XIII. Factors affecting selection of syringes and needles (Job Sheets #1, #2, #3, and #4)

A. Type of medication

B. Route of administration

C. Age, size, and physical condition of the patient

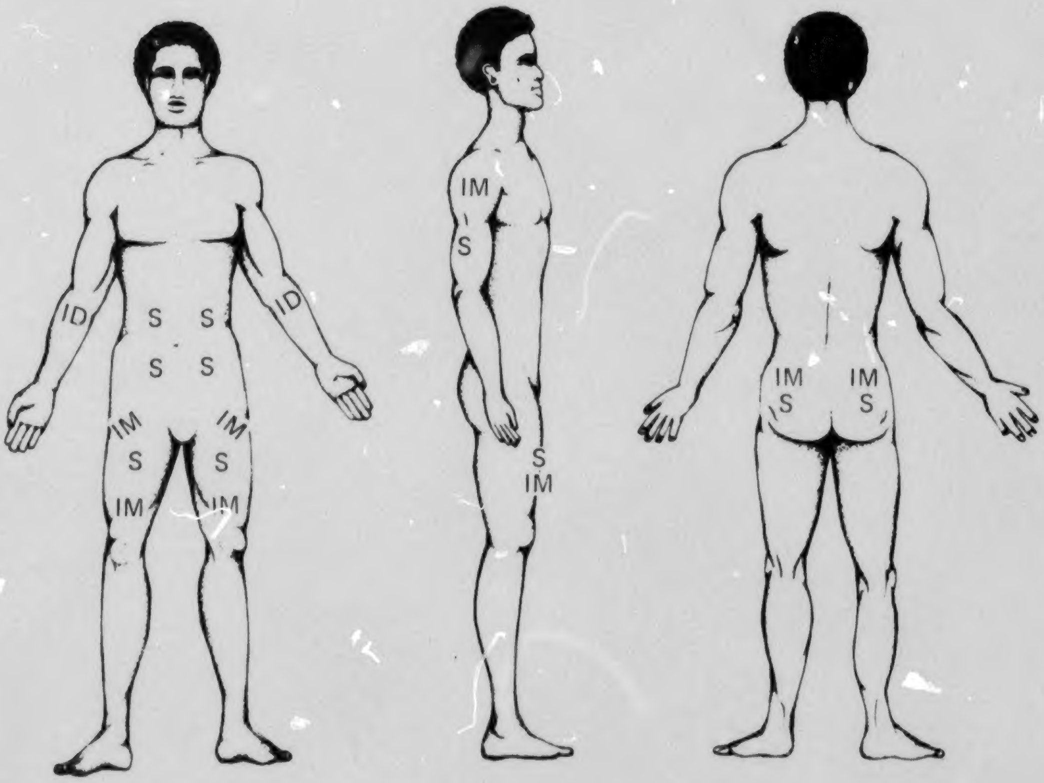
D. Amount of medication

XIV. Areas of the body that may be used for various injections (Transparencies 9 10, and 11; Job Sheets #5 and #6)

S = Subcutaneous

ID = Intradermal

IM = Intramuscular



Preparation Of Medication

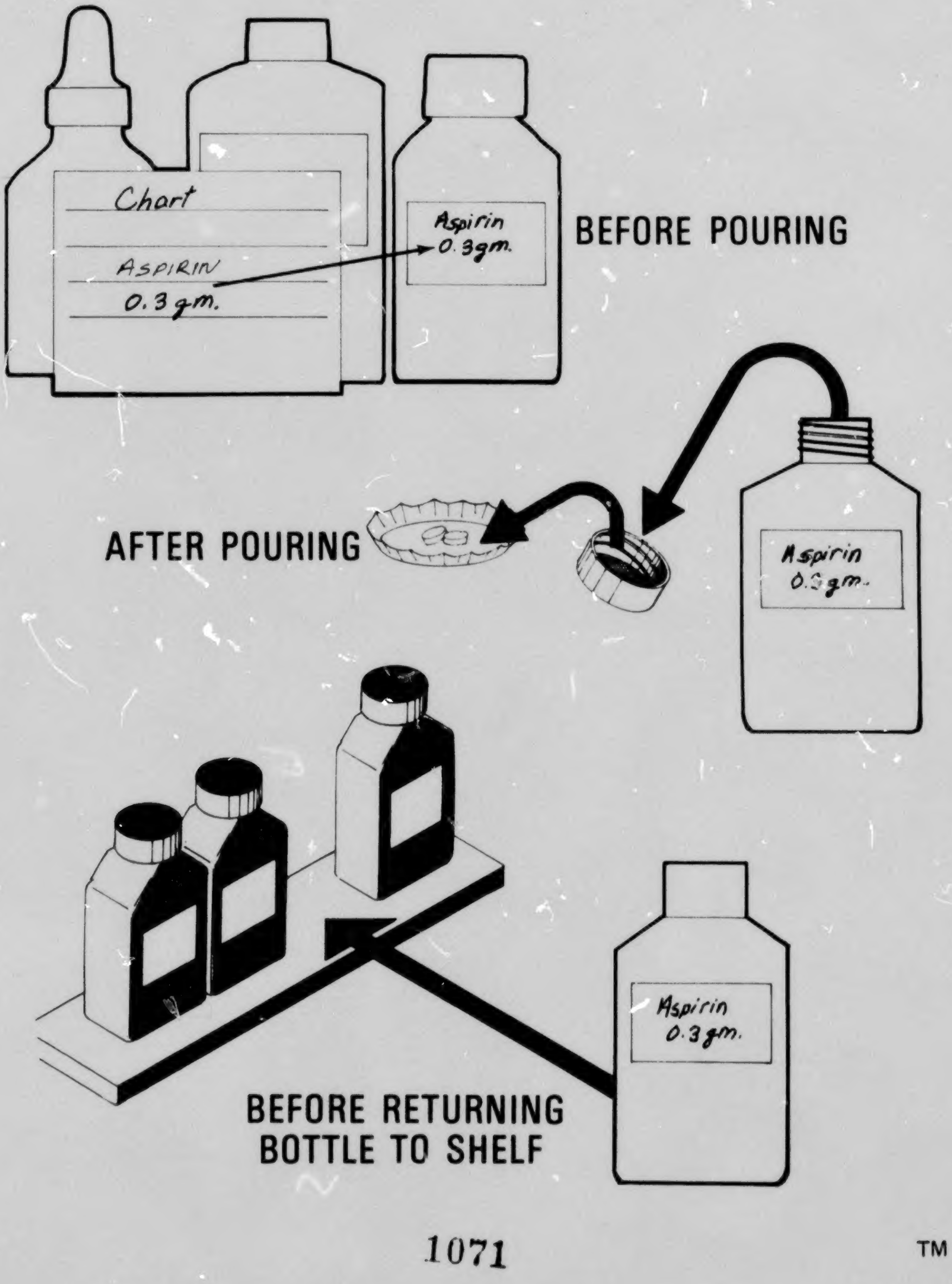
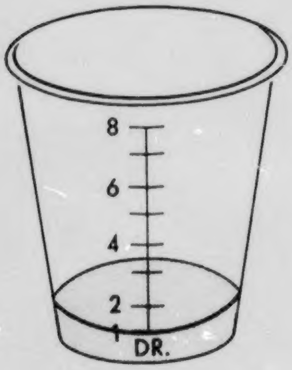


Chart
ASPIRIN
0.3 gm.
Aspirin
0.3gm.
BEFORE POURING
AFTER POURING
Aspirin
0.3 gm.
Aspirin
0.3 gm.
BEFORE RETURNING
BOTTLE TO SHELF

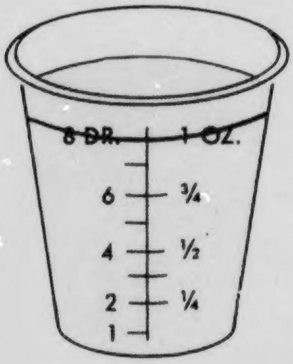
Apothecaries' Units

Liquid	Dry
60 Minims = 1 Fluidram	60 Grains = 1 Dram

One Dram

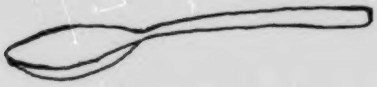


One Ounce


8 DR.
1 OZ.
6
¾
4
½
2
¼
1

Apothecaries', Metric, and Household Units

1 Tsp



= ʒi =

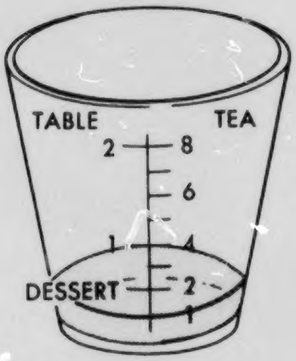
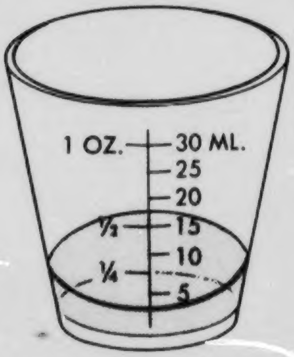
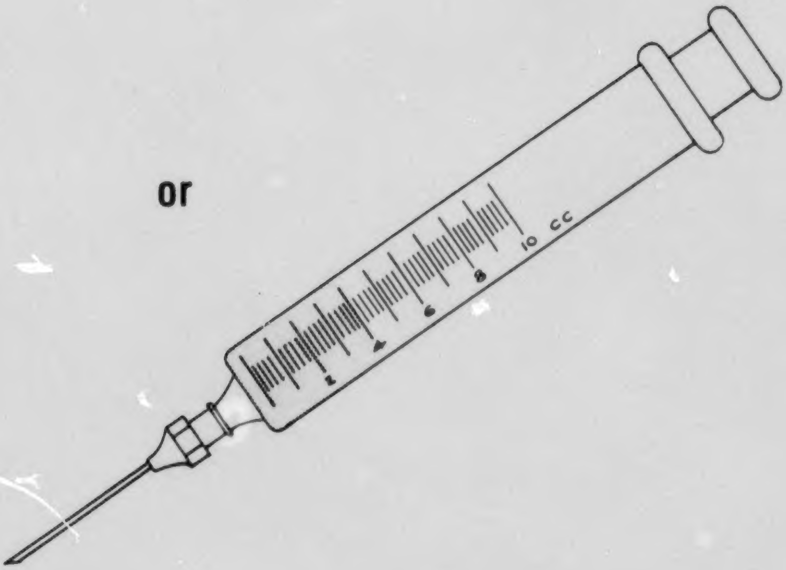


TABLE
TEA
2
8
6
1
4
DESSERT
2
1

4 ML


1 OZ.
30 ML.
25
20
½
15
¼
10
5

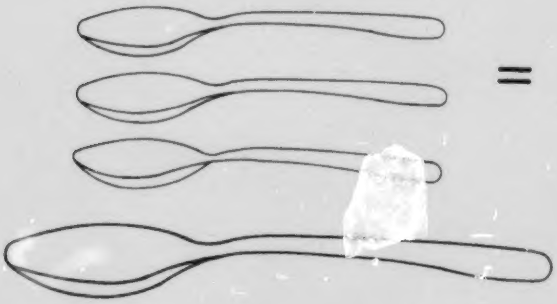
or



Apothecaries', Metric, and Household Units

(Continued)

3 Tsp or 1 Tbsp

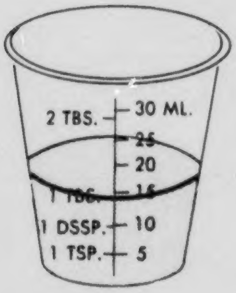


=

ʒ i̇v

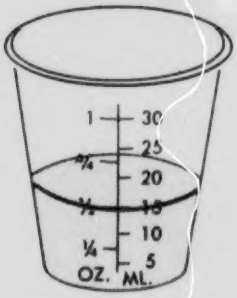
or

℥ ss


2 TBS.
30 ML.
25
20
1 TBS.
15
1 DSSP.
10
1 TSP.
5

15 ML

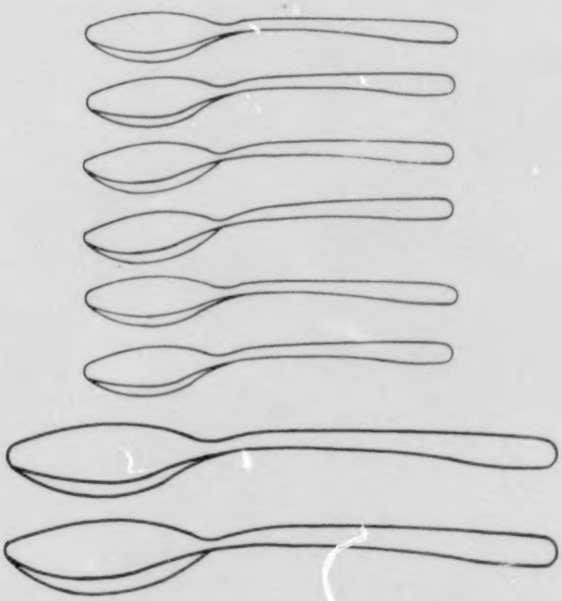
=


1
30
25
¾
20
½
15
10
¼
5
OZ.
ML.

Apothecaries', Metric, and Household Units

(Continued)

6 Tsp or 2 Tbsp

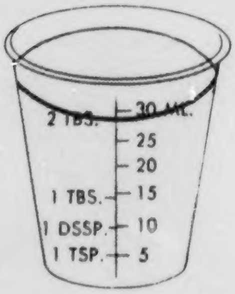


=

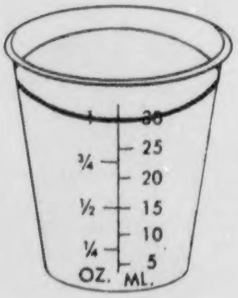
ʒ viii

or

℥ i


2 TBS.
30 ML.
25
20
1 TBS.
15
1 DSSP.
10
1 TSP.
5

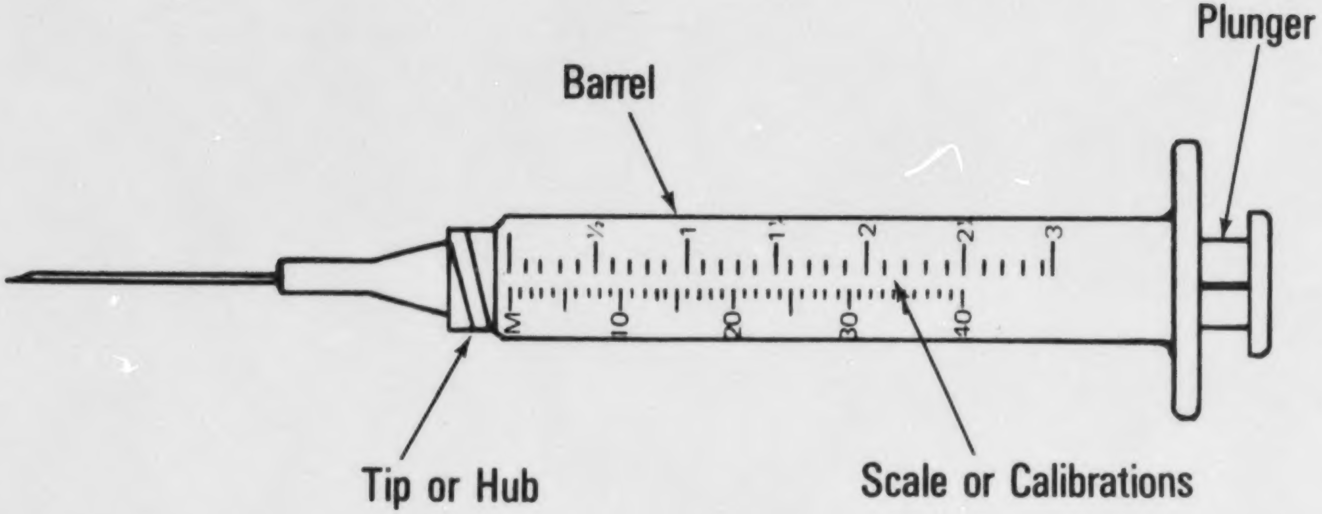
30 ML


1
30
¾
25
20
½
15
¼
10
5
OZ.
ML.

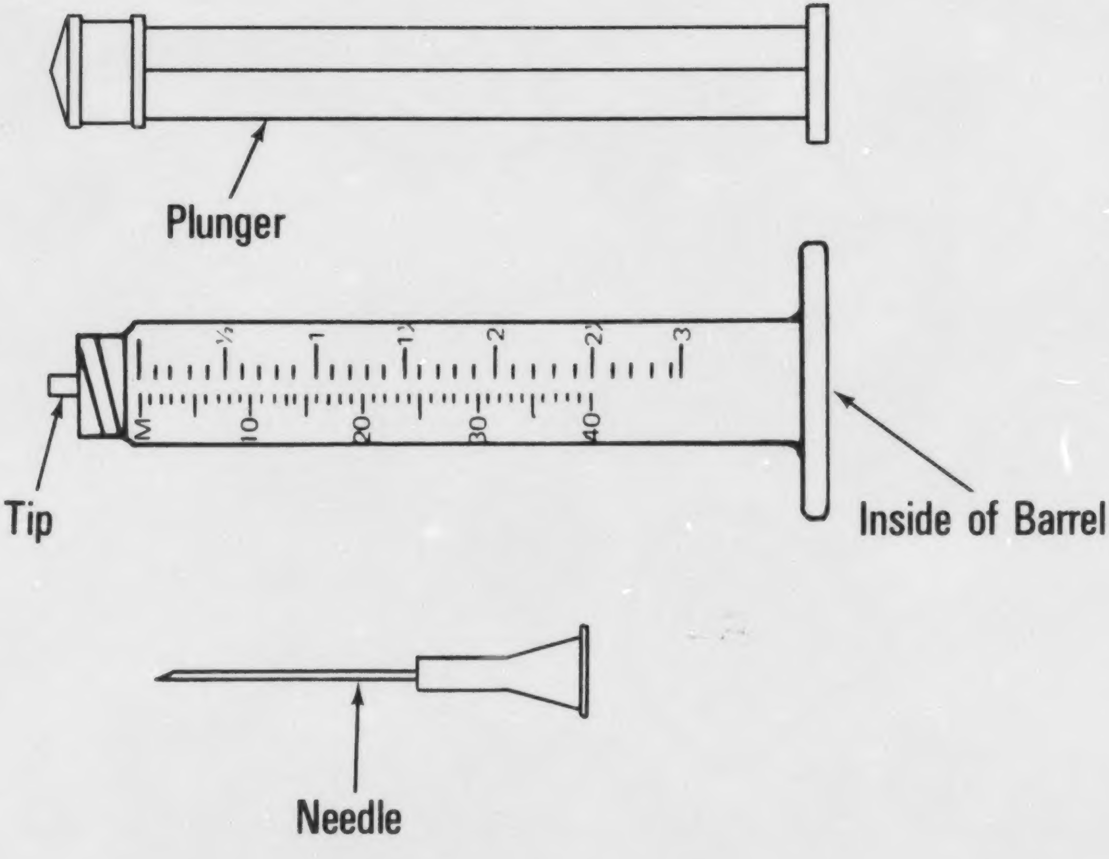
=

℥ i

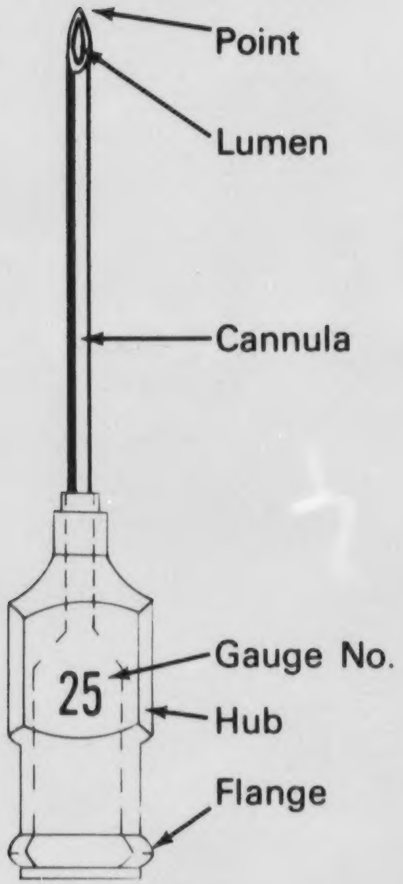
Components of a Syringe

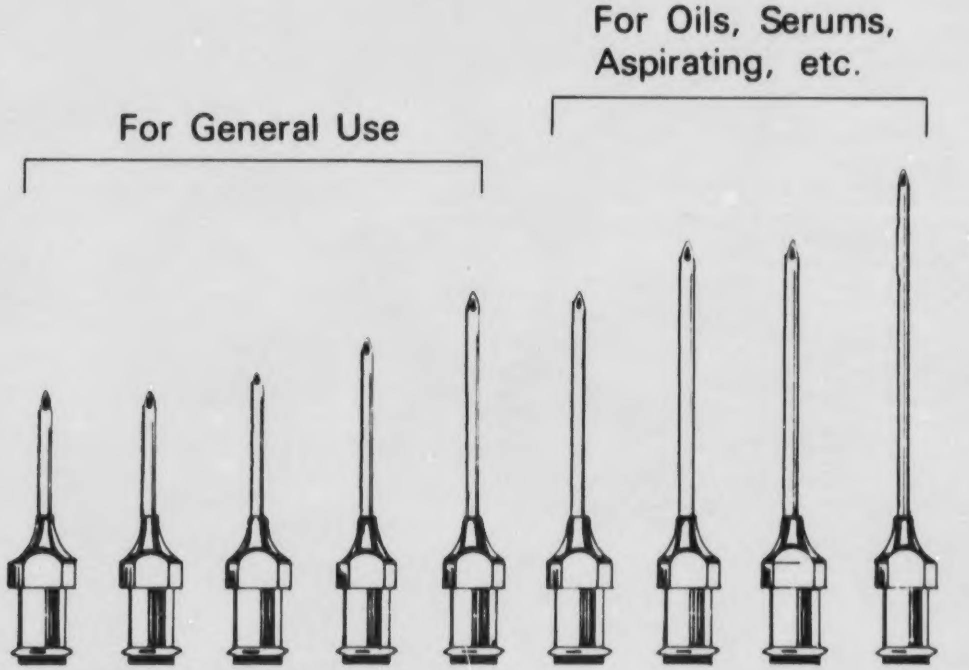

Plunger
Barrel
½
1
1½
2
2½
3
M
10
20
30
40
Tip or Hub
Scale or Calibrations

Syringe Parts to Be Kept Sterile


Plunger
½
1
1½
2
2½
3
M
10
20
30
40
Tip
Inside of Barrel
Needle

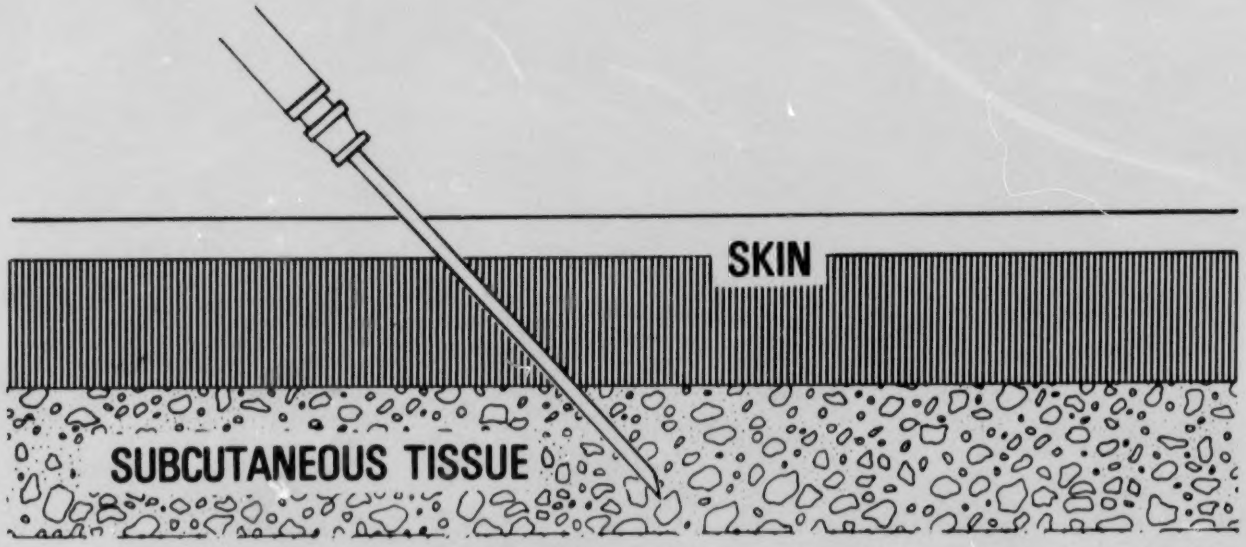
Needles


Point
Lumen
Cannula
25
Gauge No.
Hub
Flange


For Oils, Serums, Aspirating, etc.
For General Use

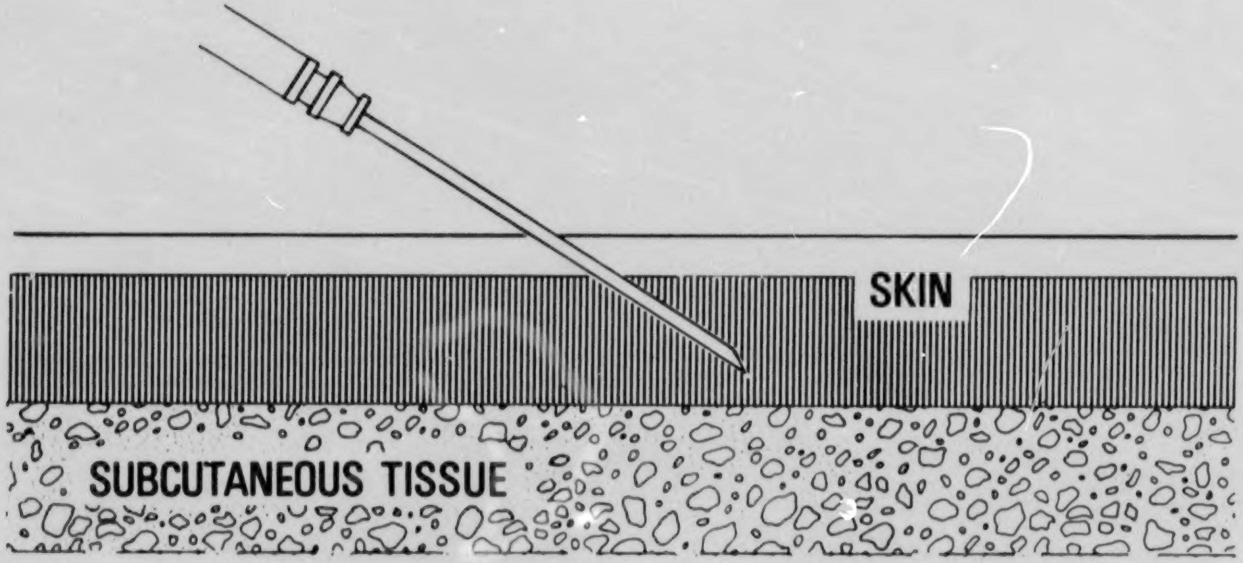
Gauges	27	26	25	24	23	22	20	19	18
Lengths	1/2	1/2	5/8	3/4	3/4	1—1¼ 1½	1—1¼ 1½	1½—2	1½—2

Subcutaneous or Hypodermic Injection


SKIN
SUBCUTANEOUS TISSUE

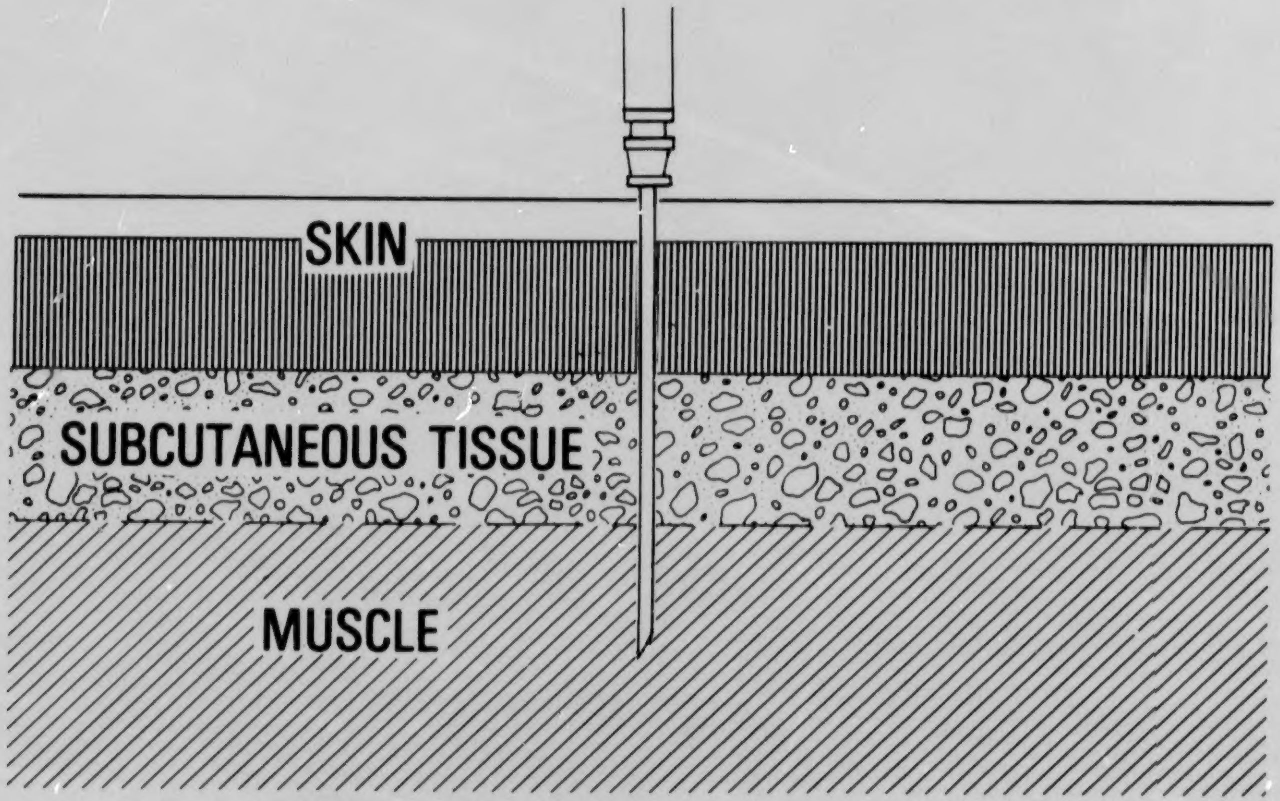
Needle Enters the Skin at a 45 Degree Angle;
the Tip Stops in the Subcutaneous Tissue

Intradermal Injection


SKIN
SUBCUTANEOUS TISSUE

Needle Is Held at a 15 Degree Angle
and Inserted into the Dermal Layer

Intramuscular Injection


SKIN
SUBCUTANEOUS TISSUE
MUSCLE

The Needle Is Inserted at a 90 Degree Angle into the Center of a Muscle

ADMINISTRATION OF MEDICATIONS
UNIT V

JOB SHEET #1--USE A SYRINGE

(CAUTION: This simulated procedure need not be practiced using sterile technique. It should be emphasized, however, that *absolute* sterility of medication, needles, and syringe is necessary whenever an injection is given.)

I. Equipment

   A. Syringes, various sizes for comparison

   B. Syringe (2 1/2 or 3 cc size), one for each student to use

   C. Needle, one for each student

   D. Vials of solution

II. Procedure

   A. Identify the parts of the syringe

      1. Barrel

      2. Plunger

      3. Scales or calibrations

      4. Tip or hub

   B. Assemble syringe

   C. Observe the scales or markings on the syringe

      1. Locate the first long line, the 1 cc mark

      2. Count the short lines between the tip end of the barrel and the 1 cc mark

      (NOTE: How much does each mark indicate?)

   D. Pull plunger to mark indicating 1.4 cc, 1.5 cc, 0.6 cc, and 2 cc

   E. Compare the various sizes of syringes

   (NOTE: Do the marks always indicate the same amount?)

   F. Place a needle on the syringe

   G. Pull plunger back to 1 cc mark

   H. Inject 1 cc of air into a vial

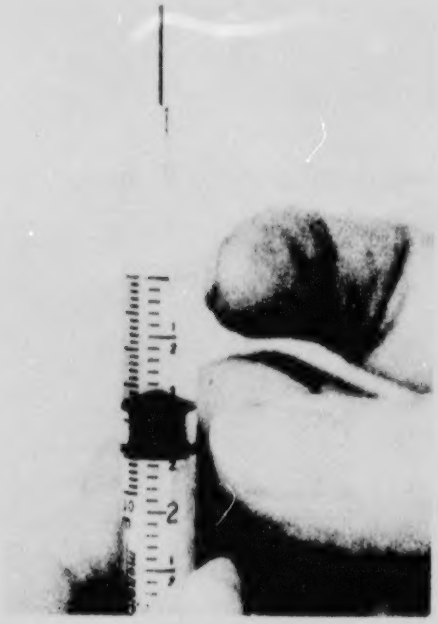
JOB SHEET #1

I. Invert vial and withdraw 1 cc of fluid

(NOTE: Introducing a volume of air equal to the volume of solution to be withdrawn increases the pressure within the vial, making withdrawal of an accurate amount easier.)

J. Expel any remaining air from the syringe (Figure 1)

FIGURE 1



K. Discard solution

L. Draw up 1.6 cc of fluid

M. Dispose of used equipment as instructed when finished

ADMINISTRATION OF MEDICATIONS
UNIT V

JOB SHEET #2--PREPARE AN INJECTION FROM A VIAL AND AN AMPULE

I. Equipment

  A. Syringe and needle

  B. Vial or ampule of medication

  (NOTE: Vials may be multiple-dose or single-dose. If using multiple-dose vial be sure measurement of solution is correct.)

  C. Cotton balls or sponges

  D. Disinfectant solution

II. Procedure using a vial

  A. Obtain medication

  B. Compute dosage if necessary

  C. Wash hands

  D. Assemble equipment

  E. Remove cover if necessary

  F. Cleanse rubber stopper with an alcohol sponge (Figure 1)

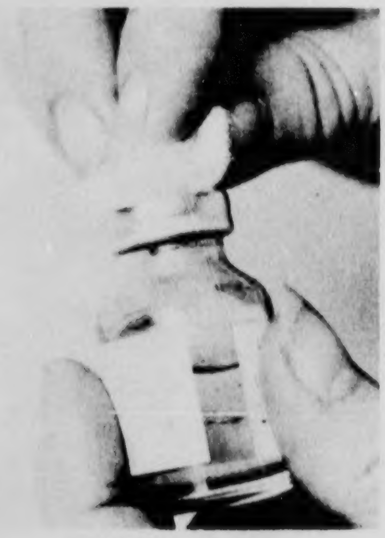


FIGURE 1

JOB SHEET #2

G. Draw air equal to desired dosage into syringe (Figure 2)

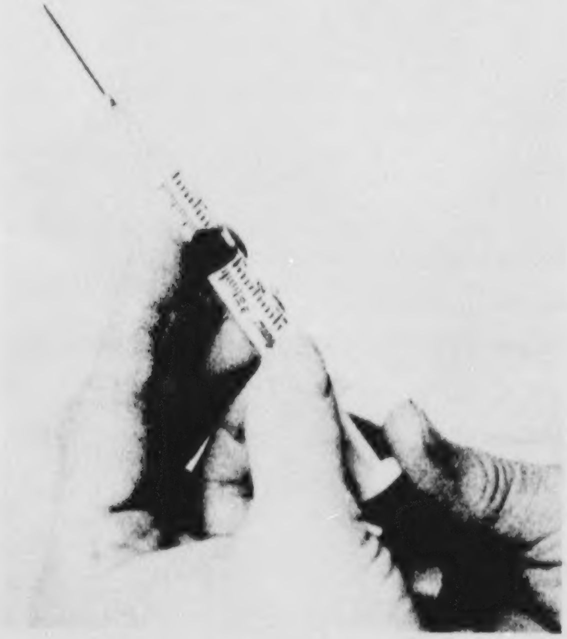


FIGURE 2

H. Insert needle into rubber stopper of vial (Figure 3)

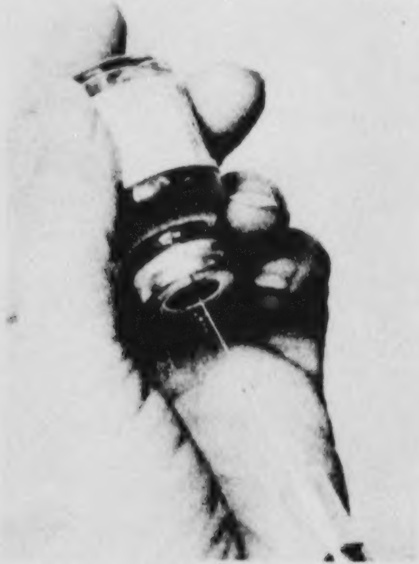


FIGURE 3

JOB SHEET #2

I. Push air from syringe into vial but not into solution (Figure 4)

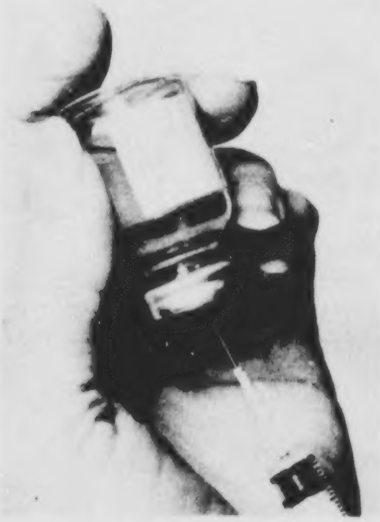


FIGURE 4

J. Invert vial and withdraw desired dosage making sure needle is in solution (Figure 5)

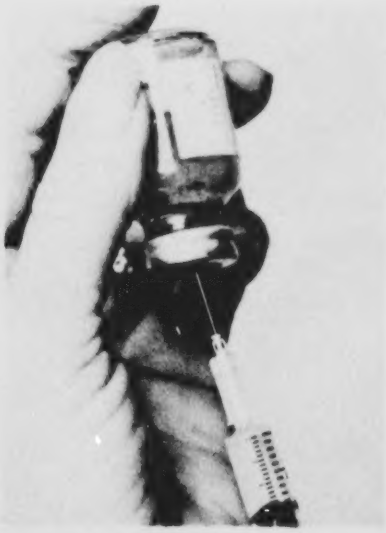


FIGURE 5

K. Withdraw needle from rubber stopper

L. Remove air bubble from syringe

JOB SHEET #2

M. Cover needle (Figure 6)

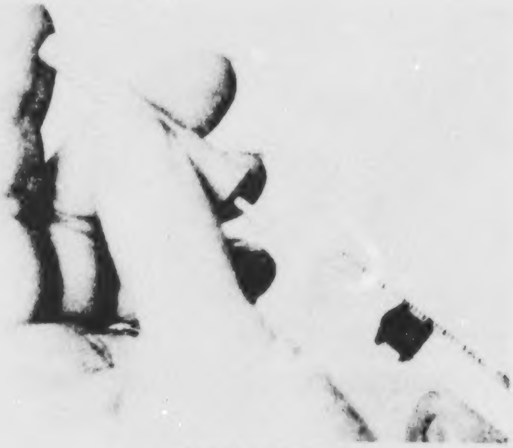


FIGURE 6

N. Place syringe and additional alcohol sponges in a secure place

(NOTE: *Never* leave a syringe and needle out. If you have to leave the room carry it with you.)

IV. Procedure using an ampule

A. Obtain medication

B. Compute dosage if necessary

C. Wash hands

D. Assemble equipment

E. Tap the top of the ampule to cause solution to collect in the body of the ampule (Figure 7)

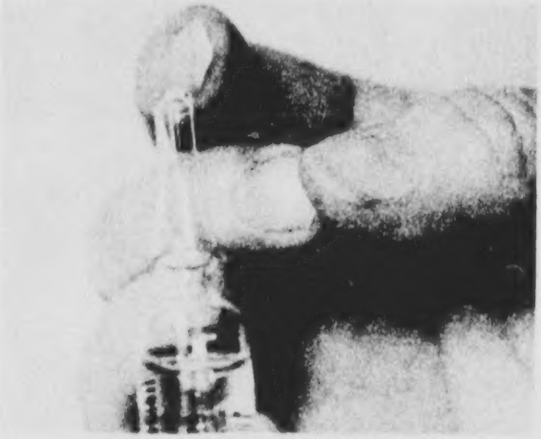


FIGURE 7

JOB SHEET #2

F. Break off top of ampule at area of constriction (Figure 8)

(NOTE: Some ampules may need to be filed at the breaking line; others are prescored. Protect fingers from cutting by holding ampule in an alcohol sponge or sterile 2 x 2.)

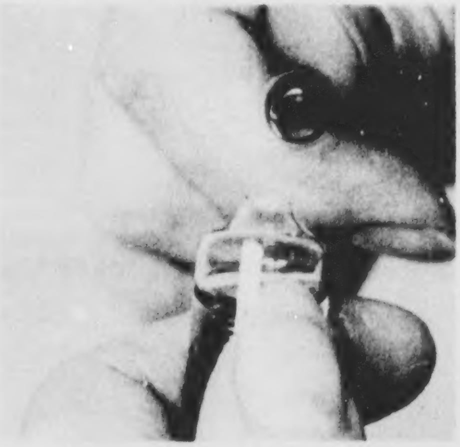


FIGURE 8

G. Withdraw solution from ampule without injecting air (Figure 9)

(NOTE: If needle is not long enough to reach the bottom of the ampule, it may be necessary to hold ampule in horizontal position or to invert it to get the required dosage. If not all of solution is used, remainder should be discarded. See Figure 10.)

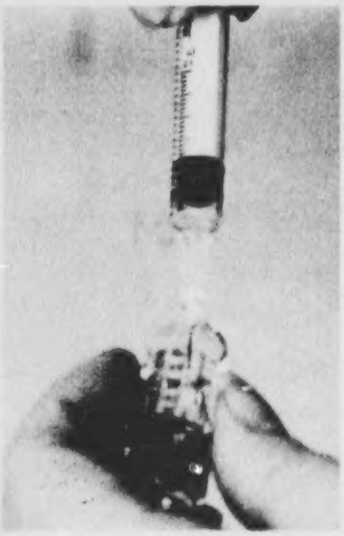


FIGURE 9

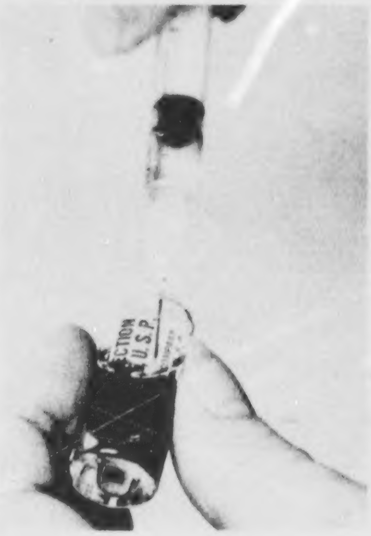


FIGURE 10

JOB SHEET #2

H. Cover needle (Figure 11)

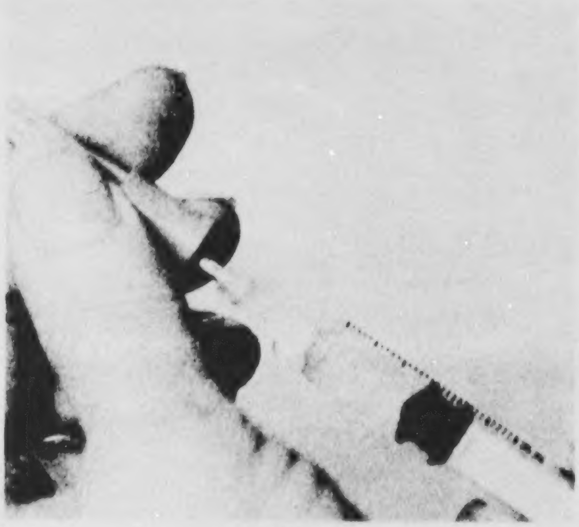


FIGURE 11

I. Place syringe and additional alcohol sponges in a secure place

ADMINISTRATION OF MEDICATIONS
UNIT V

JOB SHEET #3--USE A CARTRIDGE SYRINGE

I. Equipment

- A. Metal cartridge syringe

  (NOTE: Some companies manufacture plastic cartridge syringes.)

- B. Cartridge of medication
- C. Cotton balls or sponges
- D. Antiseptic solution

II. Procedure

- A. Compute dosage if necessary
- B. Wash hands
- C. Assemble equipment
- D. Hold the barrel of the syringe and withdraw the plunger (Figure 1)

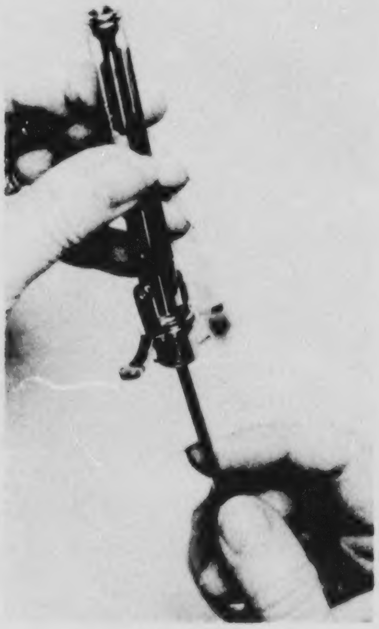


FIGURE 1

JOB SHEET #3

E. Pull plunger down until it is at a right angle to the barrel (Figure 2)

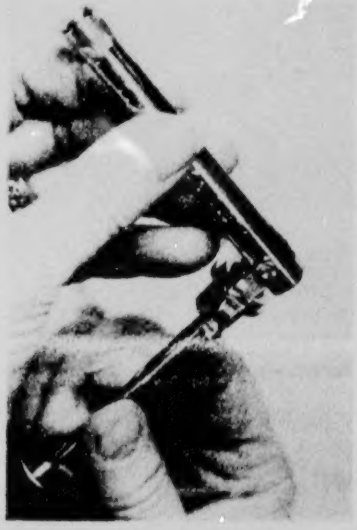


FIGURE 2

F. Insert sterile cartridge into barrel, needle end first (Figure 3)

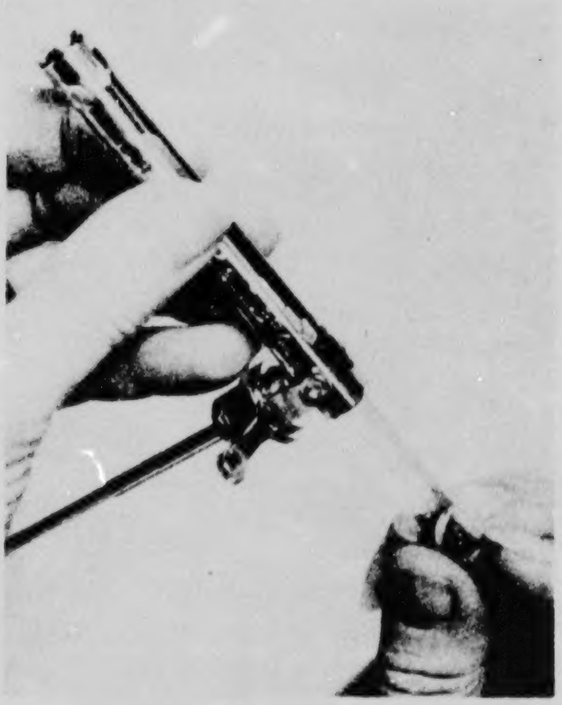


FIGURE 3

JOB SHEET #3

G. Turn cartridge in a clockwise direction until it is secured into the needle end of the barrel (Figure 4)

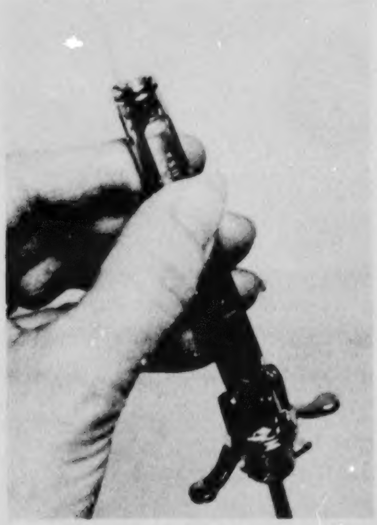


FIGURE 4

H. Swing plunger back into place and twist plunger onto threaded shaft of cartridge piston (Figure 5)

(CAUTION: Do not overtighten.)

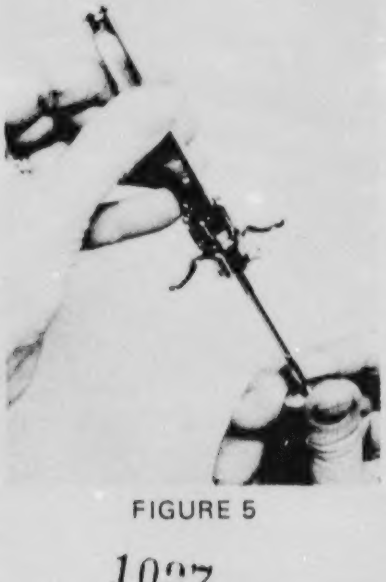


FIGURE 5

JOB SHEET #3

I. Remove rubber sheath from needle just prior to injection (Figure 6)

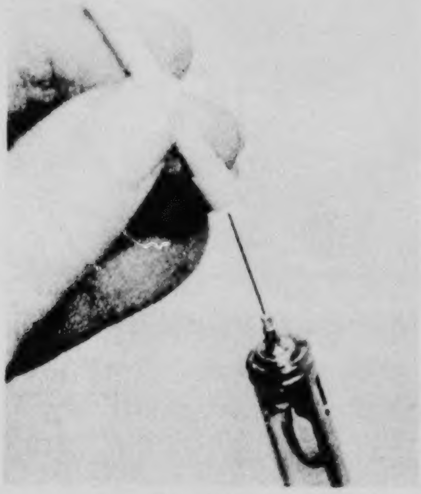


FIGURE 6

J. Pull back slightly on plunger to aspirate before injection

K. Replace sheath on needle immediately after administering injection

L. Disengage plunger by rotating counterclockwise

M. Pull plunger out and down at a right angle

N. Rotate cartridge counterclockwise to disengage at needle end of barrel

O. Remove cartridge from barrel

P. Bend needle back and forth on hub until it snaps

Q. Discard both cartridge and sheath-protected needle

R. Replace equipment

S. Wash hands

T. Chart procedure

ADMINISTRATION OF MEDICATIONS
UNIT V

JOB SHEET #4--PREPARE INSULIN FOR INJECTION

(NOTE: Many times the medical assistant will instruct patients to give their own insulin, following almost exactly these steps.)

I. Equipment

   A. Vial of insulin

   B. Insulin syringe with needle

   C. Cotton sponges with antiseptic solution

   D. Medication order from physician, either verbal or written on chart

II. Procedure

   A. Wash hands

   B. Assemble equipment

   C. Check to see that insulin is the correct strength to administer the prescribed dosage

   D. Select syringe

   E. Rotate vial of insulin to insure even mixture of solution

   (NOTE: Insulin will appear cloudy except for regular type that is clear and can be used intravenously, if needed.)

   F. Assemble syringe if necessary

   G. Check the dosage with a nurse or physician

      1. Read order carefully or repeat dosage back to physician verbally

      2. Check the syringe and vial to be certain you are using the correct strength of insulin and proper syringe

   H. Wipe top of vial with cotton sponge

   I. Draw back plunger of syringe, drawing in a volume of air equal to the volume of insulin to be withdrawn from vial

   J. Push the needle of the syringe into the rubber cap of the vial

   K. Push air into the vial

JOB SHEET #4

L. Invert vial

M. Withdraw the required amount of insulin from the vial

N. Hold the plunger tightly with the little finger and pull the needle from the bottle

O. Check the dose again

  1. Check the type of insulin and dose strength on the insulin bottle
  2. Check the order with the dose in the syringe

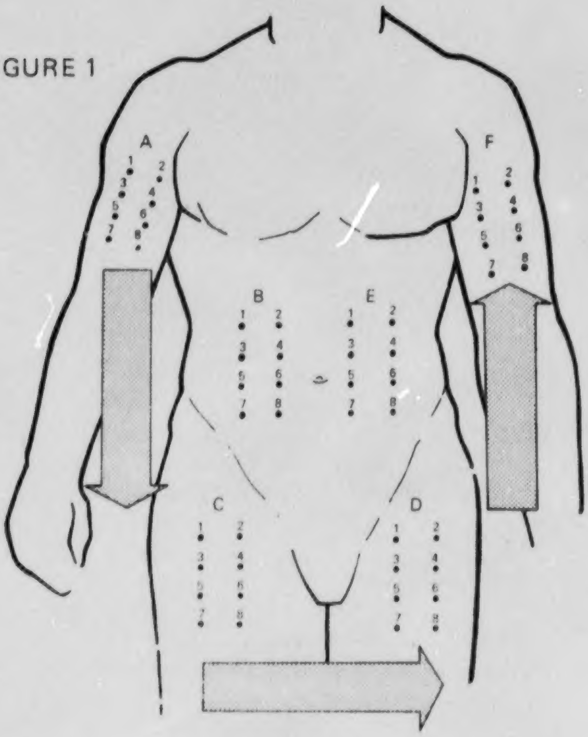
P. Have another licensed person check the dose of insulin

  1. Bottle from which insulin was drawn
  2. Insulin syringe containing the dose to be given

Q. Return remaining insulin to the refrigerator

R. Give injection sub q (Figure 1)

FIGURE 1



S. Care for equipment as instructed when procedure is completed

ADMINISTRATION OF MEDICATIONS
UNIT V

JOB SHEET #5--LOCATE INTRAMUSCULAR INJECTION SITES

I. Procedure for deltiod area

A. Remove clothing as needed

(NOTE: The deltoid area cannot be satisfactorily exposed by rolling up the sleeve.)

B. Palpate the acromion process

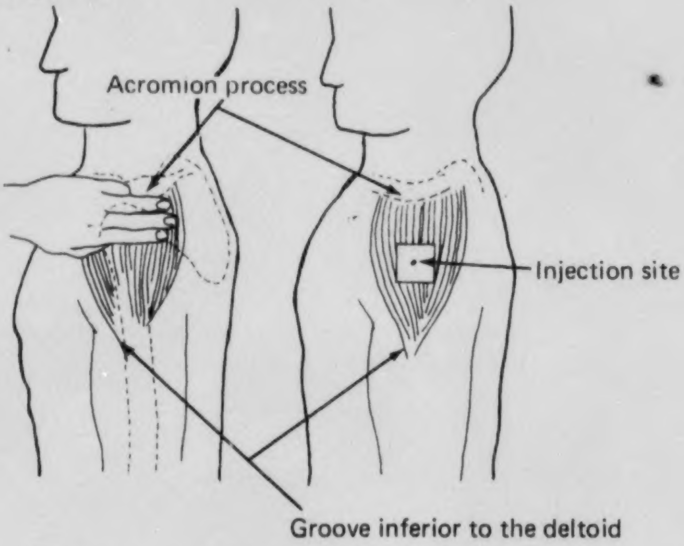
(NOTE: The acromion process is the lateral, triangular projection of the spine of the scapula which forms the point of the shoulder.)

C. Measure two or three fingerbreadths below the acromion process

JOB SHEET #5

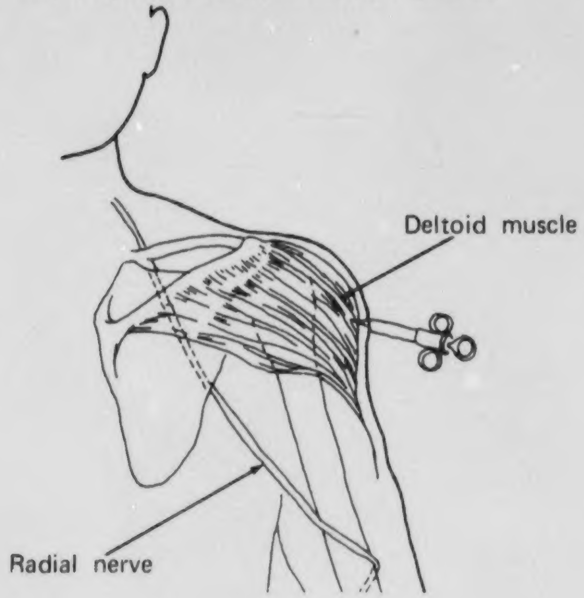
D. Locate the injection site below the fingers but above the groove inferior to the deltoid (Figure 1)

FIGURE 1


Acromion process
Injection site
Groove inferior to the deltoid

(CAUTION: An injection into the middle or lower third of the arm should be avoided as it might injure the radial nerve; see Figure 2.)

FIGURE 2


Deltoid muscle
Radial nerve

II. Posterior gluteal area

A. Position patient on abdomen if possible

B. Expose gluteal area

JOB SHEET #5

C. Palpate the gluteal landmarks

  1. Superior--Iliac crest

  2. Inferior--Gluteal fold

  3. Medial--Division between the buttocks

  4. Lateral--Anterior iliac spine; the greater trochanter

     (NOTE: The greater trochanter is the process on the femur at the upper end of its lateral surface.)

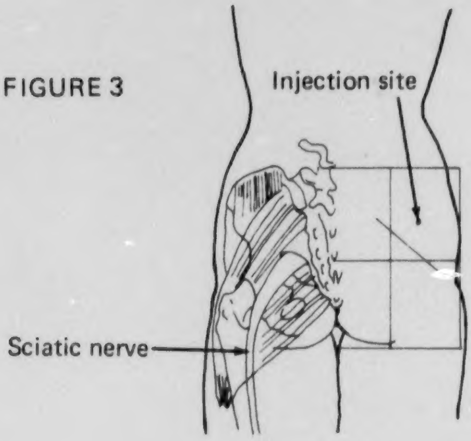
D. Divide the gluteal area into four quadrants

E. Draw a line from the posterior superior iliac crest to the greater trochanter

F. Injection site is in the upper, outer quadrant, superior to the line drawn from the iliac crest to the greater trochanter (Figure 3)

   (CAUTION: This injection site is located to avoid damage to the sciatic nerve.)

FIGURE 3



III. Lateral thigh in vastus lateralis

A. Place patient on back, abdomen, or in sitting position

B. Explore lateral side of thigh from the greater trochanter to the knee

C. Palpate greater trochanter

JOB SHEET #5

D. Measure distance one handbreadth below the greater trochanter and one handbreadth above the knee; place one hand on the midanterior thigh, the other on the midlateral thigh (Figures 4 and 5)

FIGURE 4

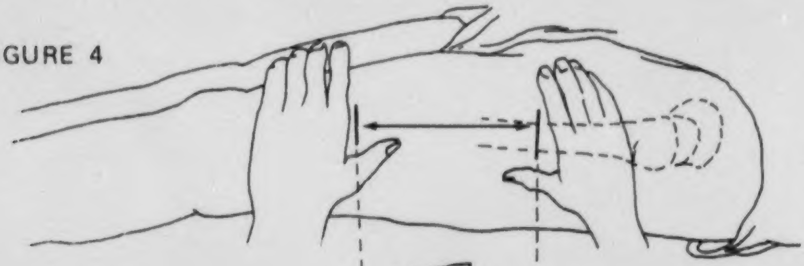
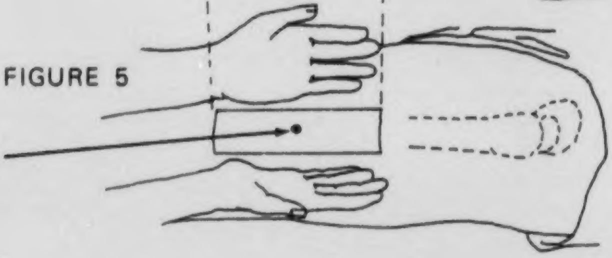


FIGURE 5

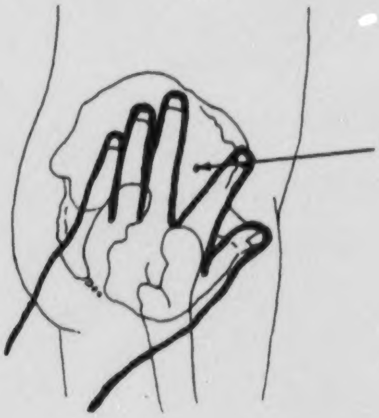


IV. Ventrogluteal site

A. Place patient on back or abdomen

B. Locate the right ventrogluteal (Figure 6)

FIGURE 6



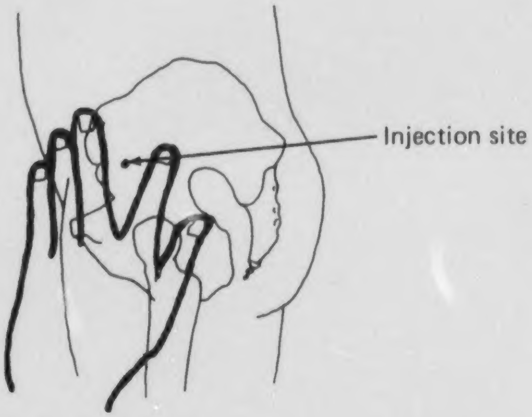
1. Place the left hand with the tip of the index finger on the anterior superior iliac spine, with fingers pointing toward the patients's chest
2. Spread the index and middle fingers as far apart as possible, forming a "V"

JOB SHEET #5

C. Locate injection site between the two fingers below the iliac crest

D. Locate the left ventrogluteal (Figure 7)

FIGURE 7



1. Place the middle finger of the left hand on the anterior superior iliac spine
2. Separate index and middle fingers to form a "V"

ADMINISTRATION OF MEDICATIONS
UNIT V

JOB SHEET #6--ADMINISTER AN INJECTION

I. Equipment

   A. Sterile syringes, correct size for medication to be given

   B. Needles, correct size to suit the amount of medication and the method of administration

   C. Medication as ordered

   D. Cotton balls or pledgets with disinfectant

II. Preparation for all injections

   A. Check the label of the medication with the order

   B. Compute dosage if necessary

   C. Wash hands

   D. Read label and prepare the medication for injection

   E. Cover needle

   F. Read label as medication bottle is returned to proper place

   G. Identify patient

   H. Explain procedure to patient

   I. Provide privacy

   J. Position patient as needed

III. Procedure for giving a subcutaneous or hypodermic injection

   (NOTE: The sites most used for subcutaneous injections are the lateral surface of the upper arm and the anterior or lateral portion of the thigh.)

   A. Expel air from syringe, being careful not to lose any medicine and keeping the needle sterile

JOB SHEET #6

B. Cleanse the injection site with alcohol sponge; using a circular motion, start at the center and extend out to cleanse approximately a two-inch area (Figure 1)

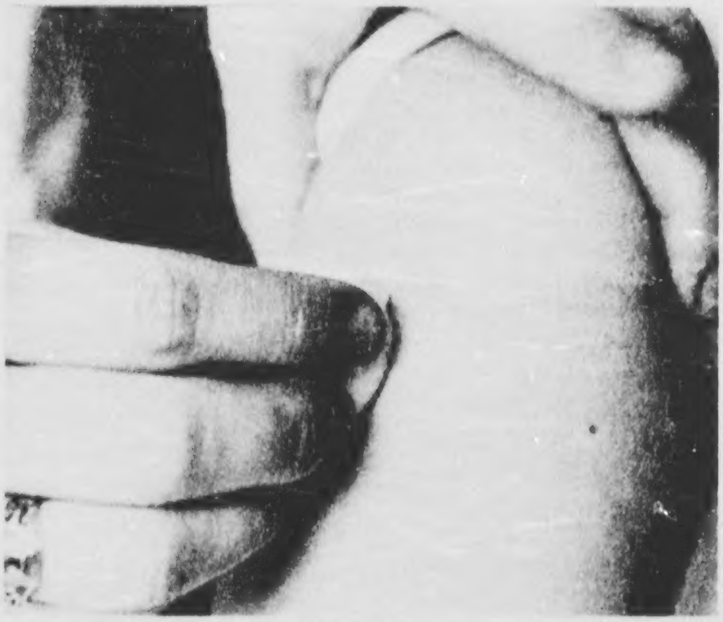


FIGURE 1

C. Pinch up the skin (Figure 2)

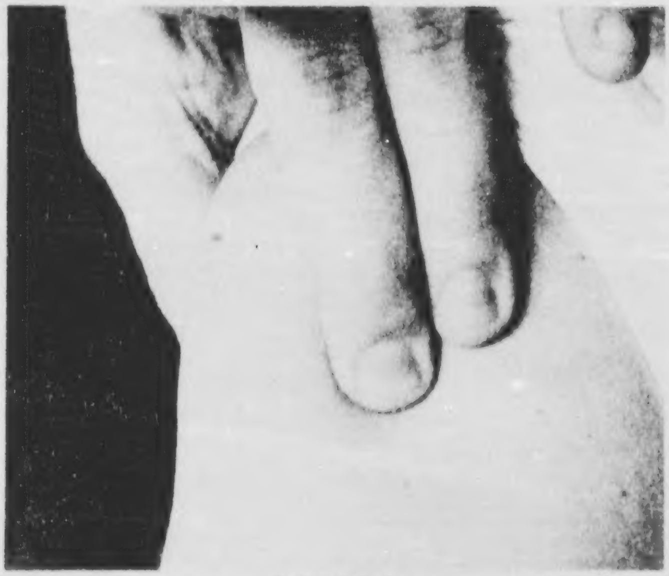


FIGURE 2

JOB SHEET #6

D. Quickly insert the needle at a 45-60° angle with the skin (Figure 3)

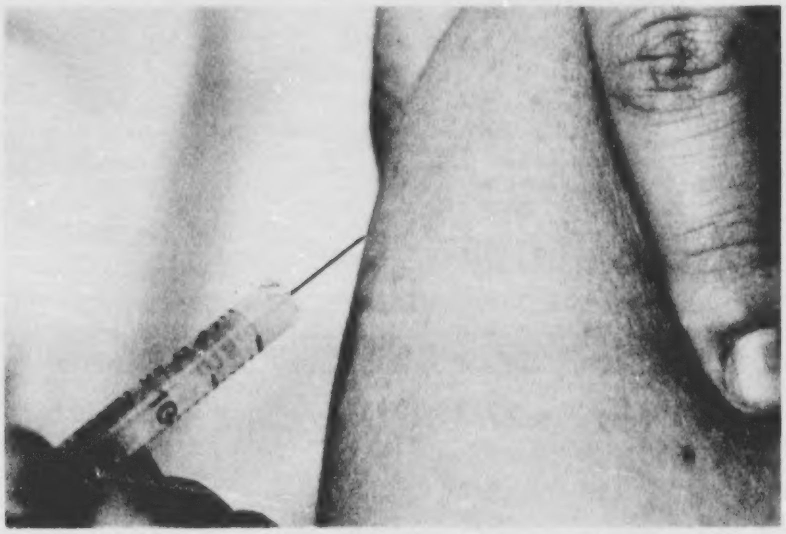


FIGURE 3

E. Release the skin and pull back (aspirate) on the plunger to be sure the tip of the needle is not in a vein (Figure 4)

(NOTE: If needle is in vein, blood will be pulled into syringe; if this happens, place alcohol sponge over site and remove needle.)

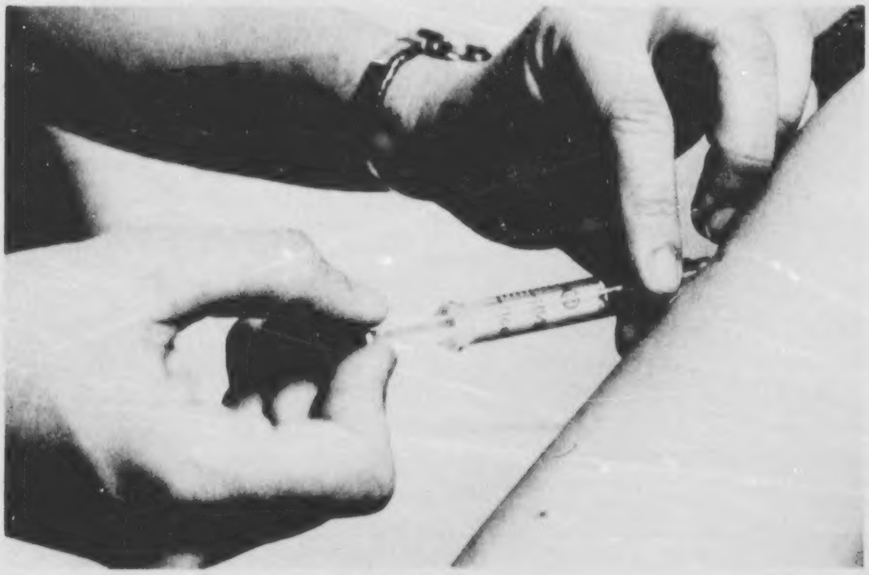


FIGURE 4

JOB SHEET #6

F. Push in the plunger slowly (Figure 5)

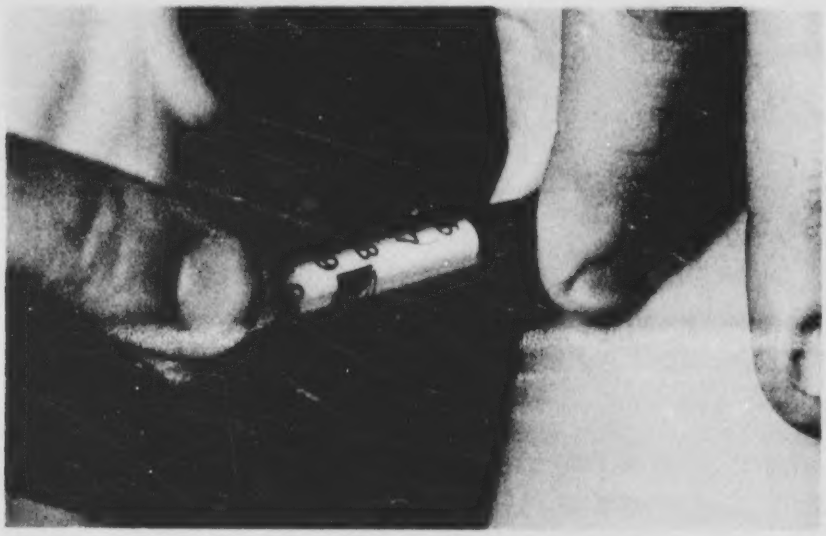


FIGURE 5

G. Withdraw the needle quickly while holding the skin at the injection site with an alcohol sponge (Figure 6)

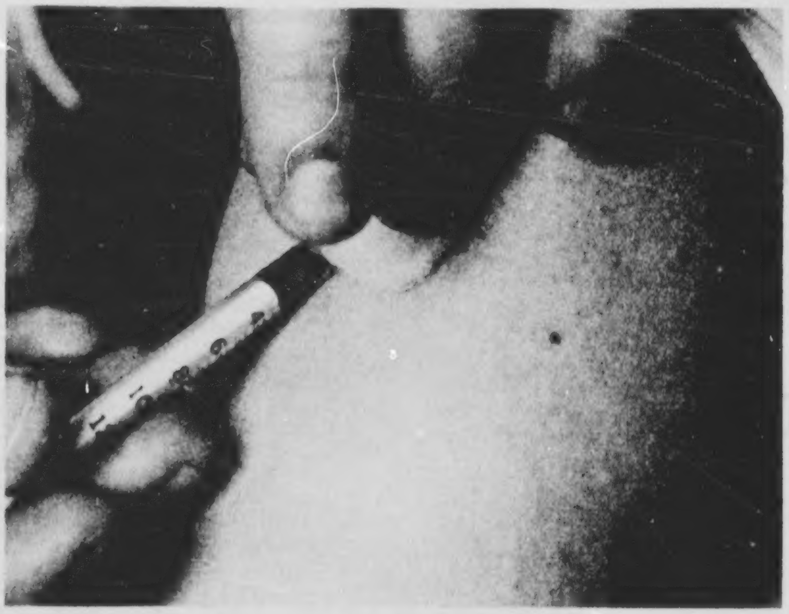


FIGURE 6

JOB SHEET #6

H. Massage the area gently with an alcohol sponge unless contraindicated (Figure 7)

FIGURE 7

(NOTE: Do not massage area if insulin, allergy, or heparin medication has been given.)

IV. Procedure for giving an intramuscular injection

(NOTE: The usual sites for intramuscular injections are the deltoid, vastus lateralis, gluteus medius muscles and ventrogluteal site.)

A. Expel air from syringe

B. Cleanse injection site

C. Stretch the skin taut (Figure 8)

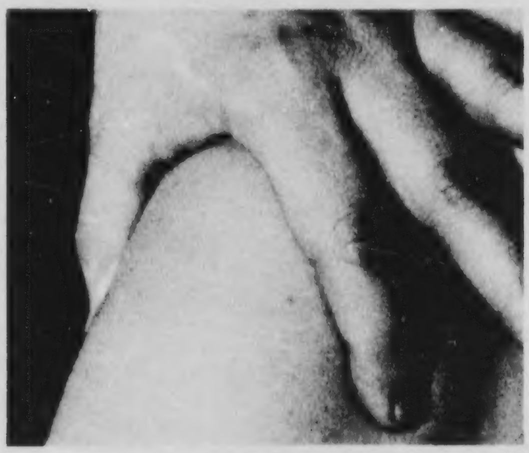


FIGURE 8

JOB SHEET #6

D. Quickly insert the needle at a 60-90° angle to the skin (Figure 9)

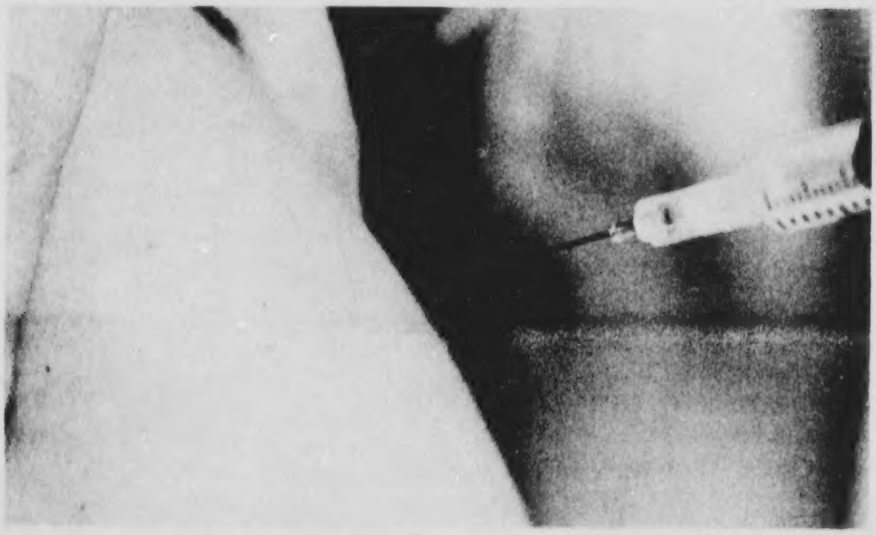


FIGURE 9

E. Release the skin and pull back (aspirate) on the plunger to be sure the tip of the needle is not in a vein (Figure 10)

(NOTE: If needle is in vein blood will be pulled into syringe; if this happens, place alcohol sponge over site and remove needle.)

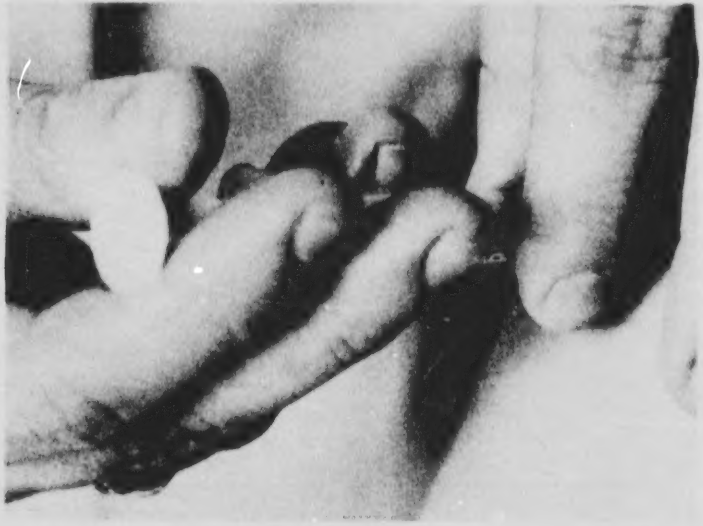


FIGURE 10

JOB SHEET #6

F. Push in the plunger of the syringe (Figure 11)

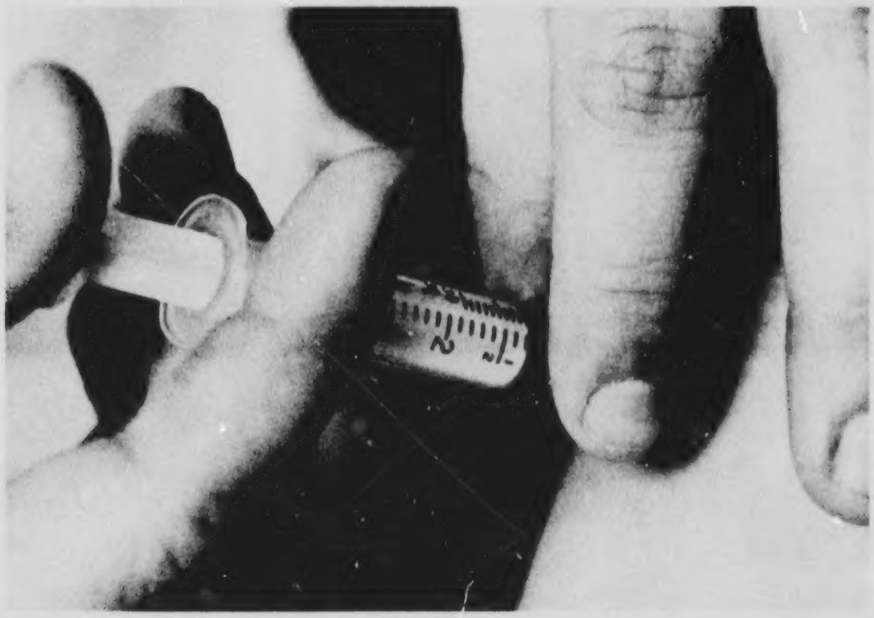


FIGURE 11

G. Withdraw the needle quickly while holding skin at the injection site with an alcohol sponge (Figure 12)

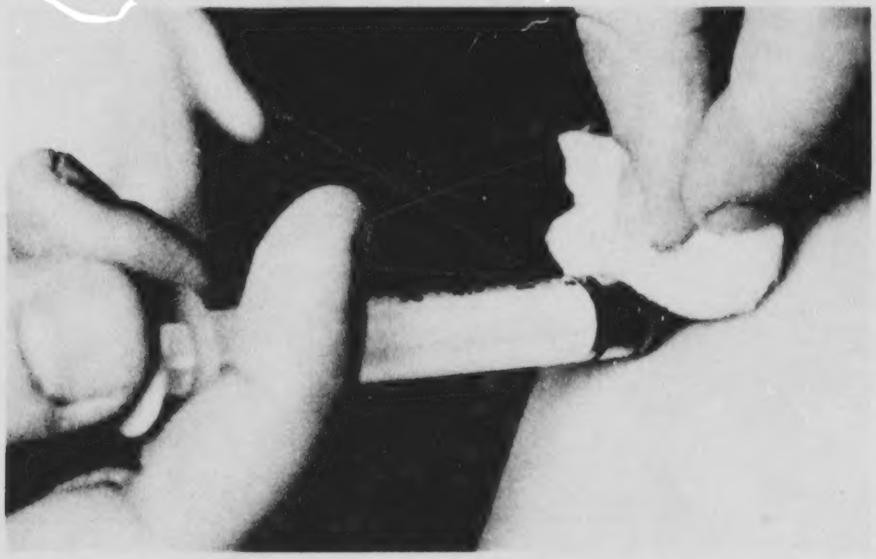


FIGURE 12

JOB SHEET #6

H. Massage area gently with alcohol sponge (Figure 13)

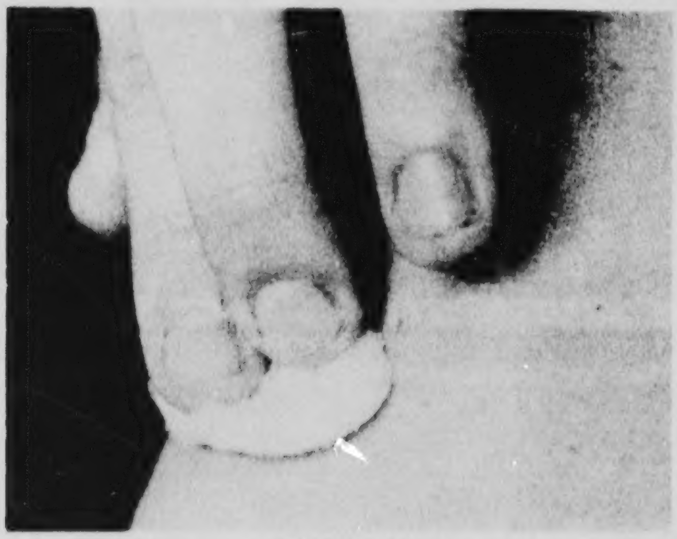


FIGURE 13

V. Procedure for giving an intradermal injection

(NOTE: The usual site for an intradermal injection is the palmar surface of the forearm.)

A. Expel air from syringe

B. Cleanse the injection site (Figure 14)

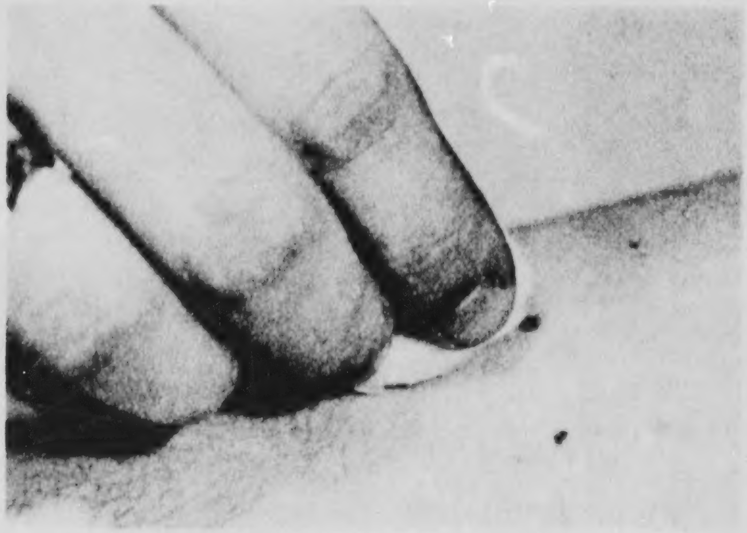


FIGURE 14

JOB SHEET #6

C. Hold skin taut by grasping posterior surface of patient's arm with your hand encircling arm (Figure 15)

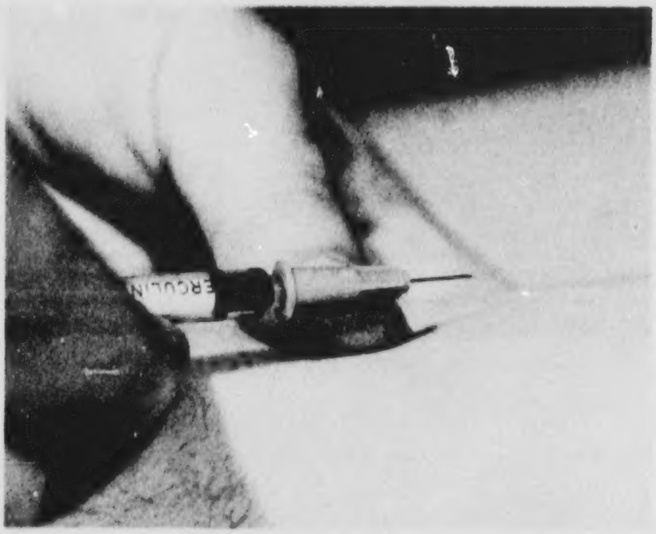


FIGURE 15

D. Insert needle, bevel up, directly under the skin at an angle of 15° (Figure 16)

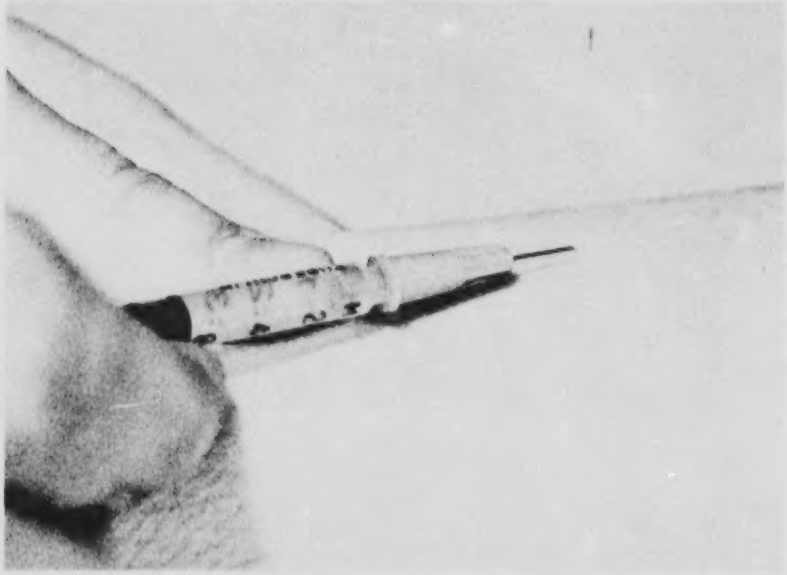


FIGURE 16

JOB SHEET #6

E. Inject prescribed amount of medication (Figure 17)

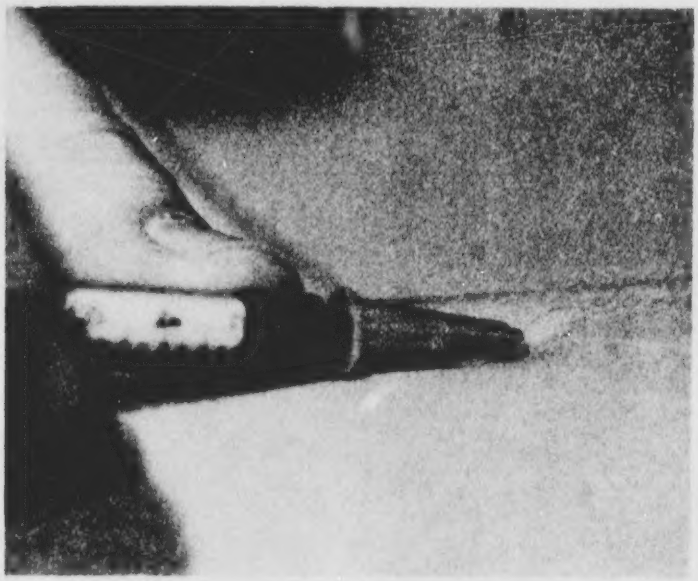


FIGURE 17

(NOTE: A wheal will develop.)

F. Remove the needle, but *do not* massage the area

VI. Care of equipment

A. Discard disposable equipment in prescribed manner

B. Return all equipment to proper place

C. Wash hands

VII. Charting medication

A. Chart promptly

B. Chart name of medication, amount given, exact time given, method and site of administration

C. Note any unusual symptoms before, during, or after administration

JOB SHEET #6

VIII. Z-track technique for injections

(NOTE: This method avoids leakage of medication from deeper tissues into subcutaneous tissues. This technique is used for irritating medications, repository medications, and for giving injections to obese patients.)

A. Prepare medication as for other injections, using a needle 1 1/2 inches long

B. Change the needle after withdrawing the medication from the vial when preparing irritating substances such as iron

C. Position the patient

D. Wipe injection site with alcohol sponge

E. Pull skin and underlying tissue to one side with one hand; hold until injection is given

F. Insert needle quickly at 90° angle to skin

G. Pull back on plunger (aspirate) to determine whether needle is in a vein

(NOTE: If needle is in vein blood will be pulled into syringe; if this happens, place alcohol sponge over site and remove needle.)

H. Inject medication slowly; wait ten seconds before withdrawing needle

I. Withdraw needle rapidly on the line of insertion

J. Release tissue being held with hand, allowing tissue to slide back into place, sealing in fluid

K. Massage site gently but firmly, unless contraindicated

ADMINISTRATION OF MEDICATIONS
UNIT V

TEST

NAME______________________________ SCORE______________

1. Match terms associated with administration of medications to the correct definitions. Write the correct numbers in the blanks provided.

______a. Diameter of needle

______b. Withdraw fluid and/or gases from a cavity

______c. Beneath the skin

______d. Outer cylinder of a syringe

______e. Within the skin

______f. Active main secretion of the islands of Langerhans in the pancreas; hormone essential for metabolism of carbohydrates and fats

______g. Within the muscle

______h. Introduction of fluid substance into body, usually by means of a syringe or other device connected to a hollow needle

______i. Sliding inner portion of a syringe

______j. Suddenly-formed elevation of the skin surface

______k. Space or channel through a needle

______l. Angle of a surface; angle of the point of an injection needle

1. Aspirate
2. Barrel
3. Bevel
4. Gauge
5. Injection
6. Insulin
7. Intradermal
8. Intramuscular
9. Lumen
10. Plunger
11. Subcutaneous
12. Wheal

2. List the five "rights" of administering medications.

a. ______________________________

b. ______________________________

c. ______________________________

d. ______________________________

e. ______________________________

3. Select from the following list safety measures to observe when giving medications. Mark each correct answer with an "X."

   ______a. Give only the medications which you prepare

   ______b. Never use an unlabeled bottle

   ______c. Know the adverse reactions of medications

   ______d. Always read the medication label three times

   ______e. Save time by having someone else draw up or prepare medications

   ______f. Make accurate, exact measurements of medications

   ______g. Never return medicine to a container after pouring it or removing from container

   ______h. Know what the medication is and why it is being given

   ______i. Do not combine two partially filled containers of like medications

4. Distinguish between systems of measurement. Write an "A" before characteristics of the Apothecaries' system, an "M" before characteristics of the metric system, and an "H" before characteristics of the household system in the blanks provided.

   ______a. Based on decimal system, using units and multiples of ten

   ______b. Used by the British and Americans

   ______c. Invented by the French in the late eighteenth century

   ______d. Uses common utensils when medications are given

   ______e. Uses symbols or abbreviations and Roman numerals for written measurements of medications

   ______f. Based on weights and volumes of simple items such as a grain of wheat, a small stone, or a container of liquid; began in ancient Greek and Roman times

   ______g. Should be used only when other measurements are not readily available because it is approximate

   ______h. Uses abbreviations and Arabic numerals for written measurements of medications

   ______i. Enables medical assistant to give instructions to patient or parent if either of other two systems are not understood

5. Write Apothecaries' symbols of dry weight and liquid volume.

   a. Dry weight

      1) 12 ounces = ______________________

      2) 60 grains = ______________________

      3) 8 drams = ______________________

b. Liquid volume

1) 2 pints = ______________________

2) 4 quarts = ______________________

3) 8 drams = ______________________

4) 60 minims = ______________________

5) 16 ounces = ______________________

6. Match metric prefixes to the correct values. Write the correct numbers in the blanks provided.

_____a. One-hundredth (0.01)

_____b. Ten (10.0)

_____c. One hundred (100.0)

_____d. One-thousandth (0.001)

_____e. One-millionth (0.000001)

_____f. One thousand (1000.0)

_____g. One (1.0)

_____h. One-tenth (0.1)

1. Micro
2. Milli
3. Centi
4. Deci
5. Unit
6. Deka or deca
7. Hecto
8. Kilo

7. Write abbreviations used in measuring systems.

a. Drop -- ____________

b. Kilogram -- ____________

c. Ounce -- ____________

d. Gallon -- ____________

e. Gram -- ____________

f. Grain -- ____________

g. Milligram -- ____________

h. Liter -- ____________

i. Measuring cup -- ____________

j. Dram -- ____________

k. Tablespoon -- ____________

l. Pound -- ____________

m. Cubic centimeter -- ____________

n. Pint -- ____________

o. Microgram -- ____________

p. Teaspoon -- ____________

q. Quart -- ____________

r. Minim -- ____________

8. Distinguish between symbols used in measuring systems. Write an "A" before Apothecaries' symbols, an "M" before Metric symbols, and an "H" before household symbols in the blanks provided.

_____a. Drop
_____b. Quart
_____c. Ounce
_____d. Dram
_____e. Grain
_____f. Gram
_____g. Minim
_____h. Microgram
_____i. Cup (measuring)
_____j. Pound
_____k. Gallon
_____l. Tablespoon
_____m. Kilogram
_____n. Teaspoon
_____o. Milligram
_____p. Pint
_____q. Liter
_____r. Cubic centimeter

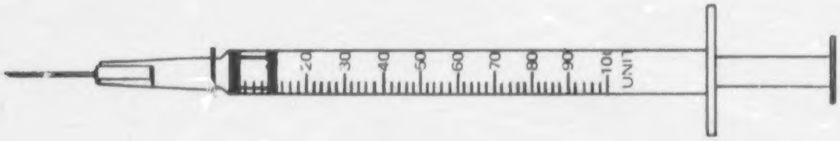
9. Complete the following chart on approximate equivalent measures of weight and volume. Write the correct measures in the blanks provided.

WEIGHT		
METRIC	APOTHECARIES'	HOUSEHOLD
a.__________	1 1/2 gr	--
1 Gm	b.__________	1/4 tsp
4 Gm	1 dr	c.__________
30 Gm	d.__________	8 tsp
e.__________	1 gr	--
f.__________	1/4 gr	--
10 mg	g.__________	--
0.4 mg	h.__________	--
1.0 kg	--	i.__________

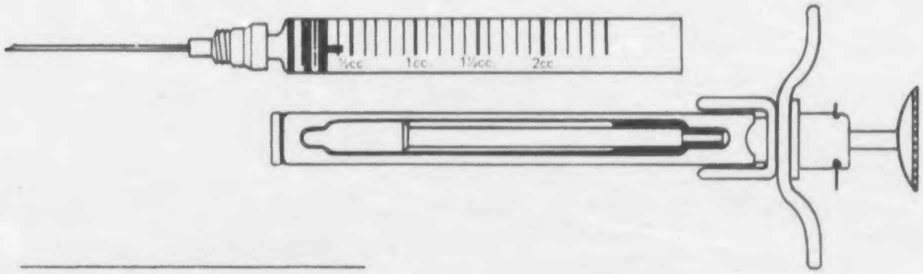
VOLUME		
METRIC	APOTHECARIES'	HOUSEHOLD
1 cc	j.________________	k.____________
4 cc	60 m/1 dr	l.____________
m.________________	1/2 oz	3 tsp/1 tbsp/1/2 oz
30 cc	n.________________	6 tsp/2 tbsp
240 to 250 cc	8 oz	o.____________
p.________________	1 pt	2 measuring cups
1000 cc/1 L	1 qt	q.____________

10. Identify the following types of syringes. Write the correct terms in the blanks provided.

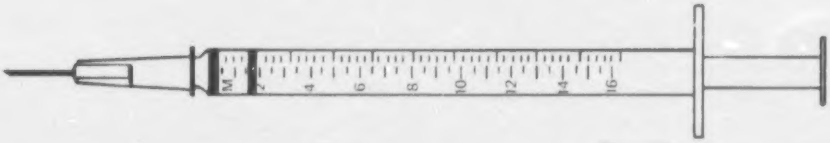
Standard Tuberculin Insulin Cartridge


20
30
40
50
60
70
80
90
100
UNIT

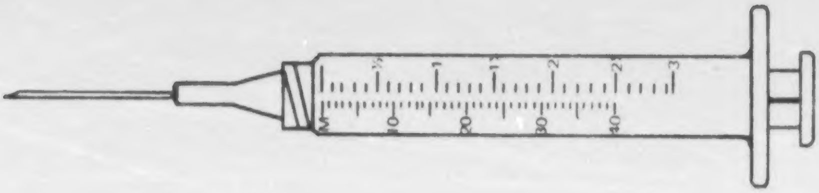
a. ______________________


½cc
1cc
1½cc
2cc

b. ______________________


M
2
4
6
8
10
12
14
16

c. ______________________


½
1
1½
2
2½
3
M
10
20
30
40

d. ____________________

11. Describe uses of components of a syringe.

a. Tip or hub--____

b. Barrel--____

c. Plunger--____

d. Scale or calibrations--____

12. Discuss needles and their use.

____

13. Select from the following list factors affecting selection of syringes and needles. Mark each correct answer with an "X."

______a. Expiration date on medication

______b. Age, size, and physical condition of patient

______c. Type of medication

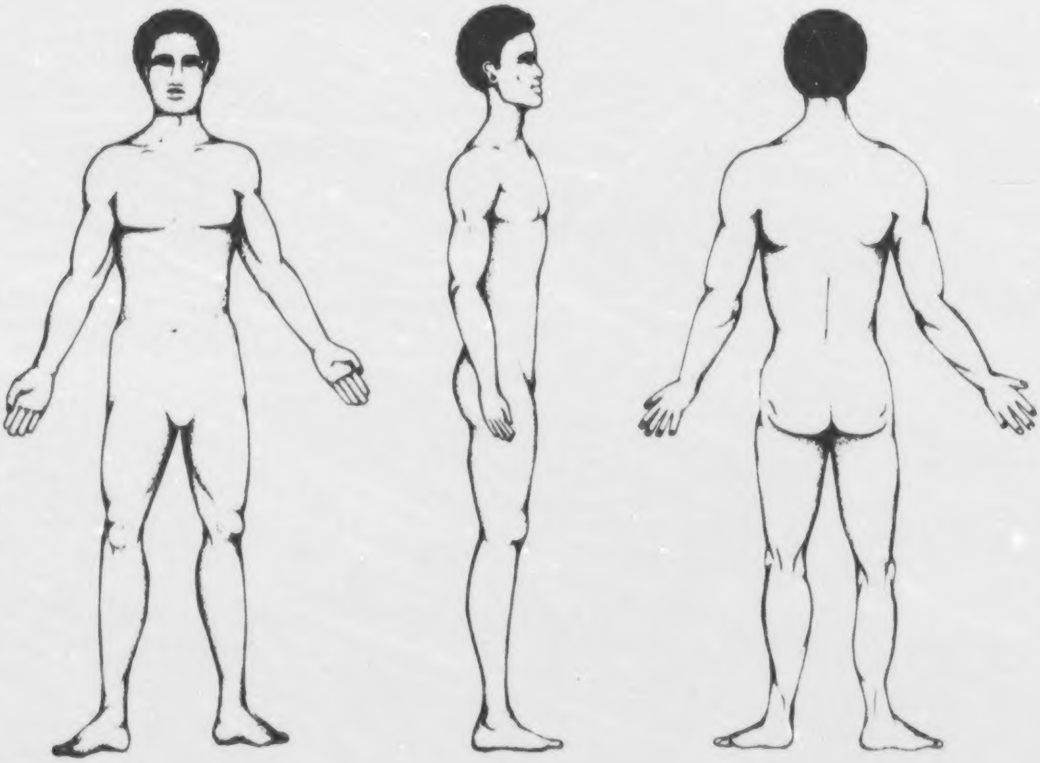
______d. Personal preference

______e. Sex of patient

______f. Route of administration

______g. Amount of medication

14. Label areas of the body that may be used for various injections. Write an "S" in the correct subcutaneous area, an "I" to show intradermal areas, and an "IM" to show intramuscular areas on each of the following illustrations.



15. Demonstrate the ability to:

    a. Use a syringe.

    b. Prepare an injection from a vial and an ampule.

    c. Use a cartridge syringe.

    d. Prepare insulin for injection.

    e. Locate intramuscular injection sites.

    f. Administer an injection.

    (NOTE: If these activities have not been finished before the test, ask your instructor when they should be completed.)

ADMINISTRATION OF MEDICATIONS
UNIT V

ANSWERS TO TEST

1. a. 4
   b. 1
   c. 11
   d. 2
   e. 7
   f. 6
   g. 8
   h. 5
   i. 10
   j. 12
   k. 9
   l. 3

2. a. Right patient
   b. Right medication
   c. Right amount
   d. Right method
   e. Right time

3. a, b, c, d, f, g, h, i

4. a. M
   b. A
   c. M
   d. H
   e. A
   f. A
   g. H
   h. M
   i. H

5. a. 1) 1 pound, pd, or lb
      2) 1 dr
      3) 1 oz
   b. 1) 1 quart
      2) 1 gallon
      3) 1 fluid ounce
      4) 1 fluidram
      5) 1 pint

6. a. 3
b. 6
c. 7
d. 2
e. 1
f. 8
g. 5
h. 4

7. a. gt
b. kg
c. oz or ℥
d. gal
e. Gm
f. gr
g. mg
h. L
i. c
j. dr or ʒ
k. T or tbsp
l. pd or lb
m. cc
n. pt
o. mcg
p. t or tsp
q. qt
r. m

8. a. H
b. A
c. A
d. A
e. A
f. M
g. A
h. M
i. H
j. A
k. A
l. H
m. M
n. H
o. M
p. A
q. M
r. M

9. a. 0.1 Gm
b. 15 gr
c. 1 tsp
d. 1 oz
e. 60 mg
f. 15 mg
g. 1/6 gr
h. 1/150 gr
i. 2.2 lb
j. 15 m
k. 15 gtt
l. 60 gtt/1 tsp
m. 15 cc
n. 8 dr/1 oz
o. 1 glassful
p. 500 cc
q. 4 measuring cups

10. a. Insulin

    b. Cartridge

    c. Tuberculin

    d. Standard

11. Descriptions should include:

    a. Needle fastens on this area; must be kept sterile

    b. Medication is drawn into this area; inside must be kept sterile

    c. Pushes medication from the syringe through the needle into the area being medicated; area that goes inside barrel must be kept sterile

    d. Markings on barrel that measure the amount of medication drawn up

12. Discussion should include:

    a. Sizes range from 16 to 27 gauge

        1) Smaller gauge needles are used for intradermal and subcutaneous injections

        2) Larger gauges are used for intramuscular, intravenous and heavier substances in oil base

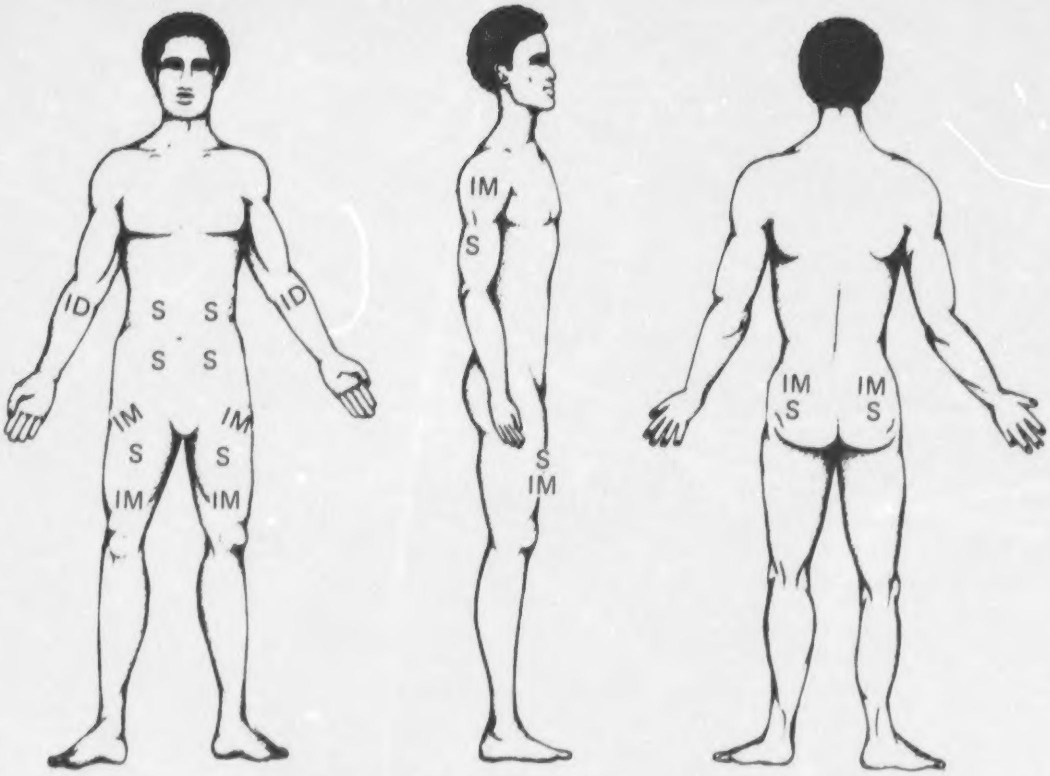
    b. Length ranges from 5/8 inch to 2 inches

        1) Usually 5/8-inch needles are used for subcutaneous and intradermal injections

        2) Longer needles are used for muscular and joint injections

13. b, c, f, g

14.


ID
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15. Performance skills evaluated to the satisfaction of the instructor

EMERGENCIES AND FIRST AID
UNIT VI

UNIT OBJECTIVE

After completion of this unit, the student should be able to provide assistance in emergencies and give first aid. This knowledge will be evidenced through completion of assignment sheets, job sheets, and unit test with a minimum of 100 percent accuracy.

SPECIFIC OBJECTIVES

After completion of this unit, the student should be able to:

1. Match terms associated with emergencies and first aid to the correct definitions.
2. Name reasons knowledge of first aid is important.
3. Discuss why first aid training is needed.
4. Arrange in order actions to take when giving first aid.
5. Identify major vessel pressure points to be used when attempting to control bleeding.
6. Match major vessel pressure points used to control bleeding to the correct areas of the body.
7. Describe care given to a victim with a bite wound.
8. Select from a list factors to consider when treating a victim with an eye injury.
9. Select from a list symptoms to observe for brain damage.
10. Distinguish between types of treatment given for ingestion of poisonous substances.
11. Select from a list factors to consider in treatment of shock.
12. Describe first aid given for contact poisoning.
13. Select from a list major causes of poisoning.
14. Select from a list causes of respiratory failure.
15. Arrange in order actions to take when a victim is bitten by a poisonous snake.

16. Match terms associated with drugs and their use to the correct definitions.
17. Complete a chart on symptoms and treatments for types of drug overdose or abuse.
18. Classify burns by degrees.
19. Match degrees of burns to the correct treatments.
20. Select from a list signs and symptoms of a heart attack.
21. Select from a list signs and symptoms of fainting.
22. Match types of seizures to the correct descriptions.
23. Determine priority of care in emergency situation.
24. Describe treatment for poisonous insect bites.
25. Handle emergencies in the medical office.
26. Demonstrate the ability to:
    - a. Control bleeding by direct pressure.
    - b. Apply a tourniquet.
    - c. Use Heimlich technique.
    - d. Use resuscitator bag.
    - e. Perform CPR (cardiopulmonary resuscitation).
    - f. Prepare for nasogastric tube insertion.
    - g. Apply dressings and bandages.
    - h. Apply a splint.
    - i. Examine eyes.
    - j. Irrigate eyes.

EMERGENCIES AND FIRST AID
UNIT VI

SUGGESTED ACTIVITIES

I. Suggested activities for instructor:

   A. Provide students with objective sheet.

   B. Provide students with information, assignment, and job sheets.

   C. Discuss unit and specific objectives.

   D. Discuss information and assignment sheets.

   E. Demonstrate and discuss procedures outlined in job sheets.

   F. Use Assignment Sheet #1 to roleplay treatment or discuss it as a class.

   G. Invite Red Cross personnel to visit to aid in teaching cardiopulmonary resuscitation using their mannequins or other first-aid information.

   H. Ask emergency medical technicians or paramedic personnel to visit class and HOSA activities to give demonstrations of emergency equipment and procedures used in giving first aid.

   I. Write to the American Heart Association for information and film list.

   J. Discuss emergency childbirth and equipment that would be needed.

   K. Call the Poison Control Center for available information and packets.

   L. Have students current "street names" for drugs in Objective 17 and any additional drugs could be abused; use Drug Control Centers for resource persons.

   M. Tour the emergency room units and the ambulance agency in your local community.

   N. Discuss concept of the a.m./p.m. emergency clinics and visit one, if possible.

   O. Have a practice first-aid drill using other students, faculty, or parents having a variety of injuries.

   P. Participate in your local hospital's disaster drill.

   Q. Promote prevention of accidents and show films listed on safety to reinforce this concept.

   R. Give test.

II. Instructional materials:

- A. Objective sheet
- B. Information sheet
- C. Assignment sheets
  - 1. Assignment Sheet #1--Determine Priority of Care in Emergency Situation
  - 2. Assignment Sheet #2--Describe Treatment for Poisonous Insect Bites
  - 3. Assignment Sheet #3--Handle Emergencies in the Medical Office
- D. Job sheets
  - 1. Job Sheet #1--Control Bleeding by Direct Pressure
  - 2. Job Sheet #2--Apply a Tourniquet
  - 3. Job Sheet #3--Use Heimlich Technique
  - 4. Job Sheet #4--Use Resuscitator Bag
  - 5. Job Sheet #5--Perform CPR (Cardiopulmonary Resuscitation)
  - 6. Job Sheet #6--Prepare for Nasogastric Tube Insertion
  - 7. Job Sheet #7--Apply Dressings and Bandages
  - 8. Job Sheet #8--Apply a Splint
  - 9. Job Sheet #9--Examine Eyes
  - 10. Job Sheet #10--Irrigate Eyes
- E. Test
- F. Answers to test

III. Unit references:

A. American Red Cross. *Standard First Aid and Personal Safety*. Garden City, New York: Doubleday and Company, Inc., 1976.

B. Thomas, Clayton L. *Taber's Cyclopedic Medical Dictionary*. Philadelphia: F.A. Davis Company, 1977.

C. *Nursing '80 Photobook: Dealing with Emergencies*. Horsham, Pennsylvania: Intermed Communications, Inc., 1980.

IV. Additional resources:

A. Films

(NOTE: Film lists can be obtained from the American Heart Association and the American Red Cross by notifying your local Red Cross chapter.)

1. *Drug Abuse: The Chemical Tomb.* Color, 19 minutes, Oklahoma State Department of Health, 1969. Available from Oklahoma State Department of Health, Northeast 10th at Stonewall, Oklahoma City, Oklahoma 73105.

2. *Drug Talk: Some Current Drug Programs.* Color, 20 minutes, Oklahoma State Department of Health, 1972. Available from Oklahoma State Department of Health.

3. *First Aid Now.* Color 28 1/2 minutes, Oklahoma State Department of Health, 1966. Available from Oklahoma State Department of Health.

   (NOTE: The following films are available on a free-loan basis to Oklahoma teachers *only* from the Oklahoma State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1515 West Sixth Street, Stillwater, Oklahoma 74074. Out-of-state teachers must order from addresses listed.)

4. *Dead is Dead.* Color, 21 minutes, Paramount, n.d. Available from Paramount Communications, 5451 Marathon Street, Hollywood, California 90038.

5. *Patient Safety I.* Color, 22 minutes, Films, Inc., n.d. Available from Films, Inc., 1144 Wilmett, Wilmett, Illinois 60091.

6. *Patient Safety II.* Color, 14 minutes, Films, Inc., n.d. Available from Films, Inc., 1144 Wilmett, Wilmett, Illinois 60091.

B. Filmstrips

1. *What to Do in an Accident.* Available from Trainex Corporation, P.O. Box 116, Garden Grove, California 92642.

2. *This Is an Emergency.* Available from Trainex Corporation.

3. *Poison!* Available from Trainex Corporation.

C. Associations

1. American Red Cross. Write or call local chapter or obtain pamphlet list from Channing L. Bete Co., Inc., 45 Federal St., Greenfield, Massachusetts 01301.

2. American Heart Association, National Center, 7320 Greenville Avenue, Dallas, Texas 75231.

3. Emergency Medical Technology Program, 7777 S. May, Oklahoma City, Oklahoma 73159.

EMERGENCIES AND FIRST AID
UNIT VI

INFORMATION SHEET

I. Terms and definitions

A. Anaphylaxis--Hypersensitive reaction of the body to a foreign protein or drug; symptoms range from mild skin reactions to shock state

B. Asphyxiation--Decrease in amount of oxygen and increase in amount of carbon dioxide in the body as a result of some interference with respiration

(NOTE: Symptoms include rapid pulse, difficult breathing, mental disturbances, bluish discoloration of the skin, and, in extreme cases, unconsciousness and death.)

Examples: Carbon monoxide from gas exhaust, electric shock, drugs, drowning, traumatic injuries to respiratory organs, diseases that affect respiratory passages

C. Hemorrhage--Abnormal internal or external discharge of blood; external symptom is obvious blood flow and internal symptom is shock

(NOTE: Bleeding from veins is dark red in color and flows slowly, bleeding from arteries is bright red in color and flows in spurts; either one can be very dangerous and death can occur very quickly from loss of blood.)

D. Abrasion--Scraping away of a portion of skin or mucous membrane as a result of injury or by mechanical means; bleeding is slight and usually consists of slow oozing with the only danger being infection

(NOTE: Treatment consists of cleaning wound and medicating area which then may be covered by dressing.)

E. Incision--Cut or wound made with sharp instrument

(NOTE: Treatment would depend on the length and depth of the incision. Suturing might be needed after thorough cleansing of wound and sterile dressing applied. Antibiotics may need to be given to prevent infection.)

F. Laceration--Wound or irregular tear of flesh

(NOTE: Treatment depends on the extent of damage to tissue. Thorough cleansing of wound is a must and suturing might be needed; dressing is applied and antibiotics might be given to prevent infection.)

INFORMATION SHEET

G. Wound--Internal or external break in soft parts of body tissues; caused by trauma or violence to areas of body

(NOTE: A *closed wound* is one that involves injury to underlying tissues without a break in the skin, such as a bruise. An *open wound* is one that involves a break in the skin, such as a laceration. A *puncture wound* is one in which the tissue is pierced by a sharp object creating a hole in the tissues which can be a dangerous source of infection.)

H. Avulsion--Tearing away forcibly of body part or tissues

(NOTE: In many cases, only a dressing is applied until surgical repair can be done. Limbs and other structures should be saved in case surgery can rejoin them to the body. Appendages should be packed in ice, if possible, for transport.)

I. Contusion--Injury in which skin is not broken

Example: Bruise

J. Dressing--Protective cover placed over wound

(NOTE: This is also called a *compress*.)

K. Bandage--Strip of woven material used to hold dressing or splint in place; helps to immobilize, support, and protect injured body part

L. Priority--Importance of action relative to other possible actions

(NOTE: In an emergency, injuries should be treated according to their seriousness.)

M. Fracture--Breaking of a bone

(NOTE: A *closed fracture* is one in which the skin is not broken. An *open fracture* is one in which skin is broken and the broken bone often protrudes through the opening.)

N. Antidote--Substance whch neutralizes poisons and their effects

O. Emetic--Agent which induces vomiting

(NOTE: In come cases of poisoning, this is an effective way of ridding the stomach of its contents. Quantities of water, milk, or other dilutants should be given before emetic is given. Ipecac is a common emetic and may be bought over the counter for home use.)

P. Strain--Injury to muscle resulting from overstretching

Q. Sprain--Trauma to a joint which causes pain and disability; may even result in torn ligaments

INFORMATION SHEET

R. Shock--Condition resulting from ineffective circulation of blood and oxygen; characterized by symptoms of marked decrease in blood pressure, rapid pulse, and decreased kidney function

(NOTE: Shock can be the result of major hemorrhage, electrical shock, severe trauma, emotional disorder, or allergic reaction.)

S. Poison--Any substance that interferes with normal physiological functions when taken into the body orally, or when inhaled, injected, or absorbed through the skin

T. Drug--Substance that may affect body or mind when taken into the body or applied to its surface

U. Frostbite--Freezing or effect of extreme cold on parts of the body

(NOTE: Symptoms begin with tingling and redness and then paleness and numbness. Treatment consists of gradual warming of the part to 39.4° to 40.6°C [103° to 105°F]. Gangrene of the body part may occur requiring surgical removal.)

V. Stroke--Sudden, severe attack of illness

Examples: Heat stroke, cerebrovascular accident

W. Convulsion--Involuntary attack causing victim to lose consciousness

(NOTE: This may also be know as a *seizure*.)

X. Splint--Device that immobilizes injured part when fracture is suspected

(NOTE: Splints also decrease pain and prevent further injury.)

Y. Aura--Sensation that may precede an epileptic seizure by several hours or only by a few minutes; warns victim of attack

(NOTE: This may be a type of sensory hallucination, such as a certain smell, vision, or noise.)

Z. Triage--Sorting out or classification of casualties to determine priority of needs and place of treatment

(NOTE: When a major disaster occurs and victims are brought to the health facility or area to be treated, a triage is done by health personnel to determine priorities and speed up treatment.)

AA. Lavage--To wash out or irrigate

(NOTE: This procedure is usually done in emergencies to rid body of toxic substances; can be done by naso-gastric tube for stomach, intravenously, or by dialysis.)

INFORMATION SHEET

II. Reasons knowledge of first aid is important

   A. May mean the difference between life and death

   B. May mean the difference between temporary and permanent injuries

   C. Trains one in what to do and what not to do in an emergency

III. Why first aid training is needed

   A. Accidents are the number-one cause of death

   B. There may not be time to wait for professional medical help after an accident

   C. Safety awareness needs to be promoted in the home, at work, and at play

IV. Actions to take when giving first aid (Assignment Sheet #1 and #3; Job Sheet #1 and #8)

   A. Observe overall emergency

   (NOTE: Find out exactly what happened as quickly as possible because this will prepare you for examining the victim and assessing priority of actions.)

   B. Check breathing

   (NOTE: Check by laying your hand on victim's chest and holding your ear to victim's nose and mouth.)

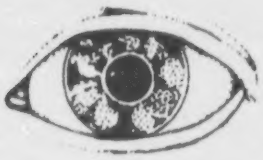
   C. Check pulse or heartbeat

   (NOTE: Radial pulse may be reduced, so check the carotid pulse in the neck or the femoral pulse in the groin.)

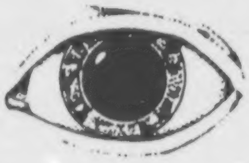
   D. Observe pupil reactions of the eyes

   (NOTE: Pupils may be constricted or dilated.)

   Examples:



Constricted



Dilated

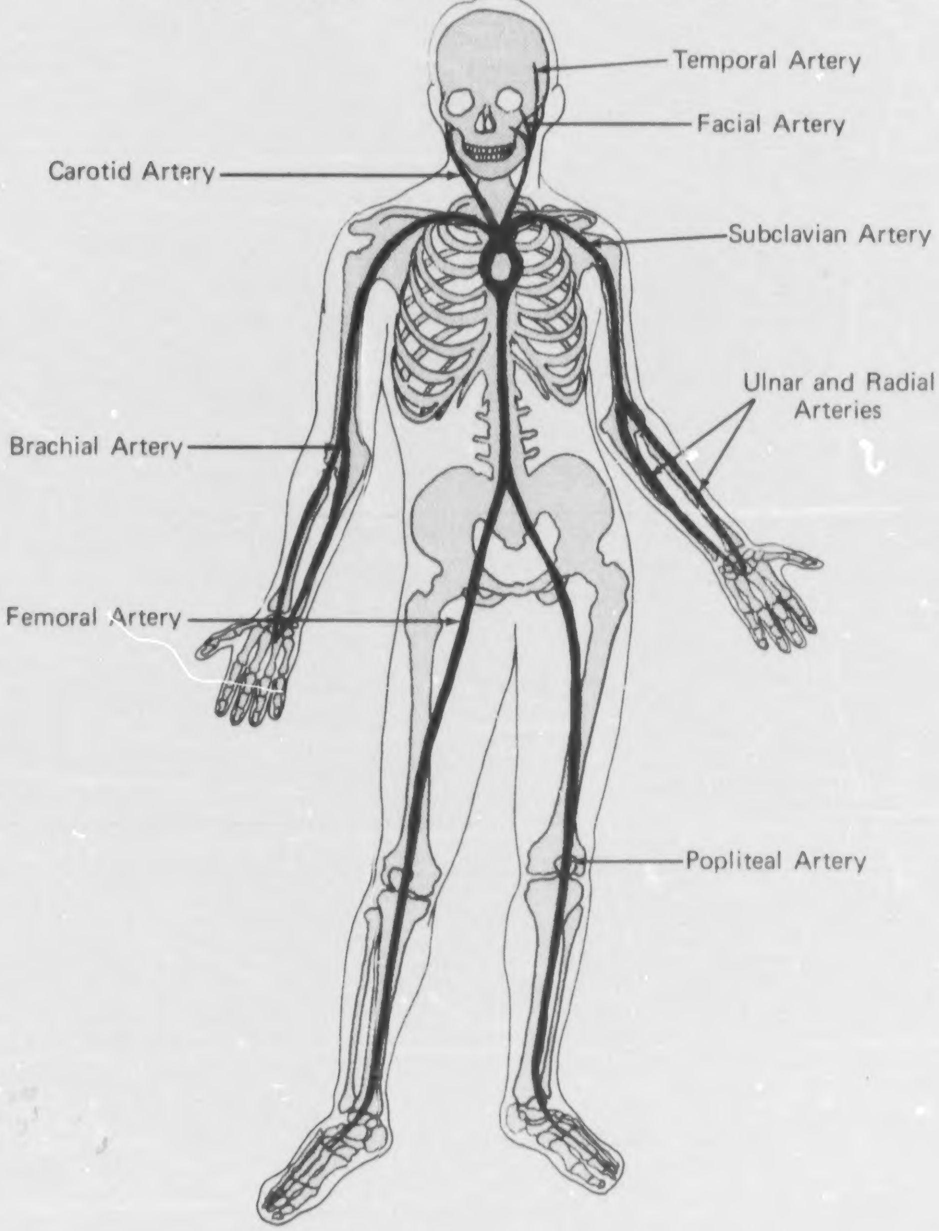
INFORMATION SHEET

E. Check alertness level, if victim is conscious, by asking questions about physical status

F. Begin definite first-aid treatment for symptoms

(NOTE: If you are not sure of symptoms and/or cause of emergency, keep victim quiet, warm, and do not give anything to drink or eat.)

V. Major vessel pressure points to be used when attempting to control bleeding


Temporal Artery
Facial Artery
Carotid Artery
Subclavian Artery
Ulnar and Radial Arteries
Brachial Artery
Femoral Artery
Popliteal Artery

INFORMATION SHEET

VI. Pressure points to use to control bleeding on areas of the body (Job Sheets #1 and #2)

A. Temporal artery--Scalp

B. Facial artery--Face

C. Carotid artery--Neck wound

(CAUTION: If the carotid artery is compressed it may cause cardiac arrest or an arrhythmia. Only compress the carotid if the artery is severed.)

D. Subclavian artery--Upper arm or shoulder

E. Brachial artery--Elbow or lower arm

F. Ulnar and radial arteries--Lower arm

G. Femoral artery--Thigh wounds

H. Ulnar and radial arteries at the wrist--Hand wounds

I. Popliteal artery--Lower leg

J. Arteries of the ankle--Foot

VII. Care given to a victim with a bite wound (Assignment Sheet #2; Job Sheet #7)

(NOTE: A bite from a human or animal can be a puncture, laceration, or avulsion wound. These can be extremely dangerous because of the many types of bacteria in the mouth. A bite can even result in gangrene or rabies.)

A. Cleanse wound thoroughly

(NOTE: Use an antiseptic soap and warm water.)

B. Seek medical attention immediately if face or neck has been bitten

C. If possible, restrain any animal that you may suspect of having rabies or to which you are not sure a rabies vaccine has been given

(NOTE: Do not kill the animal unless absolutely necessary. If killing the animal is necessary, be sure to save the head intact.)

D. Apply a dressing and limit movement of injured area by immobilization until seen by a doctor

VIII. Factors to consider when treating a victim with an eye injury (Job Sheets #9 and #10)

(NOTE: Extreme care should be taken in treatment of injuries of the eye. The eye is very sensitive and can easily be further damaged if the correct method of treatment is not carried out.)

INFORMATION SHEET

A. Do not let the victim rub eye

B. Do not attempt to remove a foreign object by using any sharp object

C. Keep victim flat on back if injury is caused by penetrating object or a severe blow

D. Cover eye with a clean dressing if foreign object is lodged in eye and cannot be removed easily with flushing of water or by gently placing wet clean cloth near object and allowing it to adhere to cloth; do not use pressure

(NOTE: Flushing of eye should be done with extreme care to avoid further injury, infection, or contamination of the other eye. Flush from inner corner to outside, letting fluid flow to side of face. Transport patient to eye specialist when possible.)

(CAUTION: Before care is given to an unconscious patient, check eyes for contact lenses, use penlight at an angle to look for edge of lenses.)

IX. Symptoms to observe for brain damage

A. Temporary loss of consciousness

B. Speech disturbance

C. Convulsions

D. Bleeding from nose, ear canal, or mouth

E. Pupils unequal in sze

(NOTE: Obtain medical assistance as quickly as possible if you suspect brain damage. Keep victim lying down. Maintain an open airway and do not give the victim any liquids.)

X. Types of treatment given for ingestion of poisonous substances

A. Strong acid--Neutralize substance with a dose of milk of magnesia and a glass of diluting fluid, such as milk or water; do not induce vomiting

(NOTE: Vomiting is not induced because emesis of a strong acid or alkali could cause further burns in respiratory and gastric tracts. Vomiting a petroleum product can also cause pneumonia. If victim has burns around the lips and mouth, if you can smell a characteristic odor on the breath, such as gasoline, or if the victim is having convulsions, do not induce vomiting.)

INFORMATION SHEET

B. Noncorrosive substance--Give appropriate antidote; induce vomiting by a variety of methods

Examples: Giving large amounts of water, milk, egg whites, olive oil, soapy water, and common over-the-counter emetics

(NOTE: The best possible treatment is to take victim to the nearest emergency center. In the meantime, gather all needed information you have to be taken with victim. If victim vomits, be sure to save some of the emesis that might need to be analyzed. There are many agencies that can give you aid if you will call them. The police department, fire department, the local hospital, and poison control centers will provide you with immediate information about antidotes to give and steps to take to give other first-aid treatment. The Oklahoma Poison Control Center is based at Children's Memorial Hospital and will send a packet upon request, including a chart of poisons and their treatment, and other first-aid material about insect and snakebites. Their address is Children's Memorial Hospital, P.O. Box 26307, Oklahoma City, Oklahoma 73126. The telephone number is 405-271-5454.)

XI. Factors to consider in treatment of shock

(NOTE: Shock may be caused from the loss of any body fluid resulting from prolonged conditions, severe injuries, infection, heart attack or stroke, poisoning from different sources, and the lack of oxygen. Shock may also be caused by metabolic disorders, such as diabetes.)

A. Keep victim lying down

B. Maintain adequate supply of oxygen (O_2)

C. Cover victim only enough to keep from losing body heat and to stabilize blood circulation

(NOTE: Shock can occur from the sudden loss of blood or the amount lost.)

D. Use good judgment in giving fluids; consider the victim's condition and the cause of shock

(NOTE: Give only a few sips at a time and give no alcoholic beverages. If there is a danger of aspiration or vomiting, do not give any fluids.)

E. Get medical help as soon as possible

XII. First aid given for contact poisoning

(NOTE: Many chemicals and plants have poisonous substances that can cause injury, illness, and maybe even death if victim is not treated.)

A. Remove all contaminated clothing and flush all exposed areas thoroughly with soap and water

INFORMATION SHEET

- B. Find source of irritation to determine what type of treatment is needed
- C. Apply mild lotion, such as calamine, if rash occurs

  (NOTE: If severe rash occurs, seek medical attention as soon as possible.)

- D. Seek medical attention immediately if respiratory symptoms, such as difficulty in breathing or wheezing, occur

  (NOTE: Many persons with allergies are very sensitive to poison ivy, poison oak, and poison sumac and can quickly become very ill. Symptoms may include itching, redness, a rash, headache, and fever. Persons who have had conditions requiring certain types of chemotherapies will have less resistance to various substances and will have temporarily lost their immunities.)

XIII. Major causes of poisoning (Job Sheet #6)

(NOTE: Small children are the most frequent victims of poisoning because they tend to put everything into their mouths; however, adults are frequent victims for various reasons.)

- A. Medicines left within reach of children

  (NOTE: Medicine should never be referred to as candy or left within reach of a child.)

- B. Poisonous substances taken from original labeled containers and put into common household containers

  (NOTE: Poisoning may occur through mouth, skin absorption, inhalation, or injection. The most important consideration when treating a victim of poisoning is locating the container and finding out what type of substance was taken. If victim is unconscious and container is missing, observe for symptoms to determine type of agent.)

- C. Improper use of poisonous spray substances
- D. Drug overdoses
- E. Combination of drugs and alcohol

XIV. Causes of respiratory failure (Job Sheets #3 and #4)

- A. Obstruction by foreign object

  (NOTE: Partial or complete blockage of the respiratory tract can be caused by a foreign object lodged in any part of the tract.)

INFORMATION SHEET

B. Atmospheric imbalance

(NOTE: Air that is depleted of oxygen or contains toxic gases can cause a respiratory arrest.)

C. Respiratory tract disorders

Examples: Asthma, diptheria, croup

D. Allergic reactions

Examples: Reactions to drugs, chemicals

XV. Actions to take when a victim is bitten by a poisonous snake

(NOTE: The practice of making an incision into the wound and drawing out the venom is now discouraged.)

A. Keep victim as quiet as possible with affected area lower than victim's heart

(NOTE: Many reactions from snakebite are aggravated by acute fear and anxiety. Transporting of victim should be done calmly and quietly.)

(CAUTION: Do not give any alcoholic substances. Victim can have sips of other fluids unless vomiting.)

B. Apply a constricting band tightly enough to slow circulation, but not tightly enough to cut if off completely

(NOTE: Proper adjustment will result in slow oozing from the wound.)

C. Apply ice pack, if possible

(NOTE: If possible, call ahead to a medical facility so that they will have antivenom available to give victim immediately. Try to identify the type of snake to assist in determining the antidote.)

XVI. Terms and definitions associated with drugs and their use

A. Drug misuse--Use of drugs for effects or conditions for which they are not properly suited, or for correct purposes but administering or taking an incorrect dose

B. Drug abuse--Excessive or persistent use of a drug without medical regulation

C. Drug dependence--Compulsive desire to take a drug to experience its effect or to avoid the discomfort in its absence

INFORMATION SHEET

D. Hallucinogens--Drugs that produce bizarre mood changes which produce disturbances of thoughts, emotions, and sensations, illusions, and delusions

E. Stimulants (uppers)--Drugs used to increase mental activity and to offset exhaustion

F. Tranquilizers--Drugs used to reduce mental stress and excitement without interfering with normal mental activity

G. Narcotics--Drugs which depress the central nervous system and are usually habit-forming; controlled by government

H. Depressants--Drugs which depress nervous system and body functions, producing relaxation and sleep

I. Inhalants--Volatile substances that, when purposely breathed, cause an intoxicated feeling

XVII. Symptoms and treatments for types of drug overdose or abuse

(NOTE: Many of these drugs are incompatible with alcohol and if taken together can produce side effects and possible death.)

DRUG	SYMPTOMS	TREATMENT
Alcohol	Feelings of exhilaration but reduced mental and physical alertness; in severe stages, decreased respirations and possible coma	Treat according to severity of symptoms; if intake produces symptoms of shock, treat for shock
Marijuana	Occassional dizziness, uncoordination, increased heart rate, reddening of eyes, throat irritation	No emergency treatment unless victim is very disoriented and has psychotic reaction
Depressants Examples: Phenobarbital, Secobarbital, Pentobarbital	Decrease in breathing possibly resulting in coma; reduction of mental and physical activity; possible death when mixed with alcohol	Maintain body temperature and open airway; get victim to hospital at once
Hallucinogens Examples: Mescaline, LSD, psilocybin, "Morning Glory Seeds," and a number of synthetic substances	Increased heart rate, blood pressure, and temperature; dilated pupils; paranoid delusions, hallucinations, and a complete loss of emotional control	Talk the person down in calm tones; transport to hospital as soon as possible

INFORMATION SHEET

DRUG	SYMPTOMS	TREATMENT
Inhalants Examples: Glue or cement, gasoline, nail polish and remover, kerosene, and many paints and lacquers	Irritation of respiratory tract, unsteadiness; excitement at first, then depression that can lead to unconsciousness	If bag has been used, remove at once; give respiratory assistance if breathing has stopped and get to hospital immediately
(NOTE: Inhaling is done with substance on a cloth held over nose and mouth, or with a paper or plastic bag with the substance in it over the face.)		
Narcotics Examples: Opium, Paregoric, Morphine, Demerol, Methadone, Dilaudid, Heroin	Reduction in activity and awareness, decrease in breathing, profuse sweating, fall in temperature, constriction of pupils, nausea and vomiting, sleep, and possible coma	Arouse the victim; maintain open airway and normal body temperature; seek medical help immediately
Stimulants Examples: Amphetamines, Benzedrine, Ritalin, Methedrine, Cocaine	Confusion, disorganization, irritability, fear, aggressive and antisocial behavior, delusions, and hallucinations	Protect from injury; maintain open airway and normal body temperature; obtain help for psychiatric disorders
Tranquilizers Examples: Miltown, Equanil, Librium, Placidyl, Valium	Decrease in body temperature, blood pressure; respiratory depression; deepening state of unconsciousness (NOTE: Also can cause death if combined with alcohol.)	Arouse the victim; maintain open airway and get victim to hospital as soon as possible

XVIII. Classifications of burns by degrees

A. First degree burns

(NOTE: First degree burns usually result from overexposure to the sun, light contact with hot objects, or contact with hot water or scalding steam.)

1. Redness or discoloration

2. Mild swelling and pain

INFORMATION SHEET

3. Rapid healing

B. Second degree burns

(NOTE: Second degree burns result from contact with hot liquids or a deep sunburn.)

1. Pain greater than first degree
2. Damage extending into the first layer of tissue
3. Mottled or red areas
4. Blistering
5. Considerable swelling
6. Wet appearance of burned area due to loss of plasma

C. Third degree burns

(NOTE: These can be caused by flame, ignited clothing, contact with hot objects, immersion in hot water, or electricity.)

1. Deep tissue destruction
2. Less pain due to nervous tissue destruction

    (NOTE: Pain may be greatly diminished by nervous tissue being burned.)

3. Charred or a white casted appearance

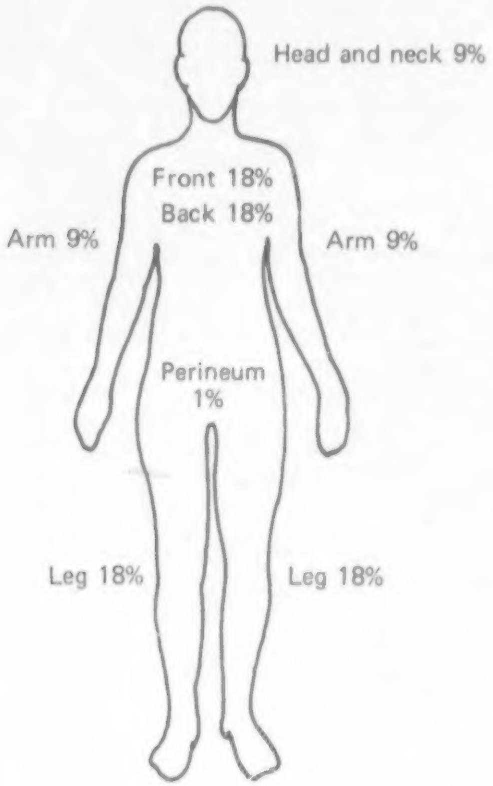
    (NOTE: A fourth degree burn is sometimes referred to and appears as a very blackened, charred area.)

INFORMATION SHEET

XIX. Treatments for degrees of burns

(NOTE: When assessing burns, it is wise to look at the percentage of the body burned and the areas injured to determine treatment. This may be accomplished by using the "Rule of Nine.")

Example:



A. First degree--Apply cold water or submerge burned area in cold water; apply a dry dressing if necessary

B. Second degree--Submerge the part in cold, but not ice water until pain subsides; blot dry gently and apply dry sterile dressings; do not break blisters and do not use any antiseptic ointments, sprays, or home remedies on burned area

C. Third degree--Cover burns with thick sterile dressings, but do not immerse in water; do not remove any tissue or burned clothing; transport victim to hospital as quickly as possible

(CAUTION: Do not give oral fluids to victims with major burn injuries that will be transported to burn centers or health facilities. If fluids are given this will result in fluid imbalance and make it more difficult for health personnel to assess electrolytes and fluid loss.)

INFORMATION SHEET

XX. Signs and symptoms of a heart attack (Job Sheet #5)

A. Persistent chest pain, usually under the sternum, which frequently radiates to one or both shoulders or arms, and to the neck, jaw, or both

B. Shortness of breath

C. Cyanosis or pallor of lips, skin, and nail beds

D. Shock symptoms (in most cases)

(NOTE: Indigestion, nausea, and vomiting are often associated with a heart attack.)

XXI. Signs and symptoms of fainting

A. Extreme pallor

B. "Cold sweats"

C. Vertigo

(NOTE: Vertigo/dizziness may be caused from a variety of conditions involving equilibrium.)

D. Numbness and tingling of extremities

E. Nausea

F. Visual disturbances

(NOTE: Usually, people who faint revive after a short time. To prevent fainting when the above symptoms occur, victim should lie down or bend head over to knee level.)

XXII. Types of seizures

(NOTE: After a grand mal seizure, patient should be allowed to sleep. Many types of seizures can be controlled with anticonvulsant drugs, such as Dilantin. To assist in treatment and evaluation of disorder the assistant should observe the length of time that convulsion continues and parts of the body affected.)

INFORMATION SHEET

A. Grand mal--Often preceded by a sensation called an *aura*; victim becomes unconscious; muscle spasms occur; salivation increases; coma-like state occurs

(NOTE: Victim needs to be protected from external environment by eliminating excitement or crowds; clothing needs to be loosened, and obstacles that might injure victim need to be removed. If respiratory failure occurs, artificial respiration should be given. There are different views on whether or not various forms of protection devices should be used to protect victim from biting tongue. Use common sense when providing this protection.)

Examples: Use specially padded tongue blades, soft towels or clean handkerchief; do not use fingers, pens, pencils or sticks

B. Petit mal--Seizure activity consists of periods of momentary unconsciousness; eyes will stare, then blink; usually lasts only a few seconds each time

C. Jacksonian--Seizure activity is limited to one side of the body or various groups of muscles

EMERGENCIES AND FIRST AID
UNIT VI

ASSIGNMENT SHEET #1--DETERMINE PRIORITY OF CARE IN EMERGENCY SITUATION

NAME______________________________ SCORE______________

One evening while driving on a two-lane highway on the edge of a small town, you arrive first at the scene of a three-car accident. You see a man in the center of the highway waving to you for help, and you can see several others lying or sitting by the cars. You pull to the side of the road and get out of the car as the man who was waving comes toward you. "We've had a terrible wreck. My son is badly hurt, and I don't think that woman over there is still alive; please help us." You quickly observe two mangled cars and glass over the pavement and roadside. The third car does not appear to be damaged as much, but you can see what appears to be gasoline leaking and there are strong fumes in the atmosphere. As you observe the scene, you look at each person who has been injured to see what will need to be done.

(NOTE: For simplification purposes, people will be identified as A, B, C, D, E, and F.)

Man A--The one who was waving you down appears to be in his late fifties. He is talking very rapidly, and his skin is very pale, cool, and clammy. A deep laceration approximately four inches long on the forehead above his left eye is oozing blood. His hands and arms are covered with small cuts and abrasions.

Man B--The son of Man A is approximately twenty years old and is lying by the first car clutching his right leg with the knee drawn up. His pants leg is torn and soaked with blood and the leg appears to be twisted. His shirt is also torn and you can see multiple cuts and abrasions on the chest area. He is moaning and crying with pain as he clutches his leg.

Man C--An older man, approximately in his seventies, is kneeling over Woman D calling her name over and over. His right arm is cradling his left arm. You can see through the torn sleeve that the arm is injured, and there is a bone protruding above the elbow. He is crying silently and you hear some wheezing when he exhales.

Woman D--An older woman in her sixties, wife of Man C, is lying on her side by the second car. Her color is very pale and there are no respirations that you can see. The pulse is weak and thready and she has a laceration on her right arm that is bleeding actively. You learn from Man C that his wife had a heart attack three months ago and has been on medication since then.

Woman E--A young woman in her thirties is pacing around the third car, crying, wringing her hands and muttering to herself. She stops to wipe blood and tears from her face and hands. Other than superficial cuts and bruises, she does not appear to have any injuries.

Woman F--The mother of Woman E is in her late fifties. Woman F is sitting beside the third car holding her right arm and hand over her left rib cage. Her left ankle is beginning to swell and is quite bruised. She appears fairly calm and tells you that she is diabetic and did not have any lunch because they were in a hurry to get to the town for a visit. She is very concerned about her daughter because she is quite nervous and has had some emotional problems in the last year.

ASSIGNMENT SHEET #1

Using your first aid knowledge, describe below your actions beginning with the priorities of care.

Would you give first aid to the least injured person so that they could help you in treating others or would you go directly to the most injured person and begin emergency first aid care? After you decide which person you would give aid to, describe each person's care. Place the number next to the person you would care for first, second, third, fourth, fifth, and sixth.

Man A--

Man B--

Man C--

Woman D--

Woman E--

ASSIGNMENT SHEET #1

Woman F--____

____

____

____

After you describe your care, divide into groups or share your work with the class. Be able to explain your reasons for choosing your priorities of care.

EMERGENCIES AND FIRST AID
UNIT VI

ASSIGNMENT SHEET #2--DESCRIBE TREATMENT FOR POISONOUS INSECT BITES

NAME______________________________ SCORE_______________

Using resource materials provided, describe below first aid treatment given for various types of wounds caused by poisonous insects.

1. Stings from ants, bees, wasps, hornets, and yellow jackets

   (NOTE: Many persons are highly allergic to this venom.)

2. Ticks

3. Spiders

   (NOTE: The most dangerous spiders are the black widow and the brown recluse. Tarantulas also carry a venom which produces allergic reactions in some humans.)

4. Scorpions

EMERGENCIES AND FIRST AID
UNIT VI

ASSIGNMENT SHEET #3--HANDLE EMERGENCIES IN THE MEDICAL OFFICE

NAME______________________________ SCORE______________

Hopefully, emergencies will never occur in your medical office. If someone calls in with an emergency condition you will very quickly tell them to go to the emergency room or call an ambulance that will have trained medical personnel that can handle the case much faster and effectively. But sometimes emergencies happen very unsuspectingly in your office. You must remember to act calmly and quickly. The following are several cases that might happen in the office that will need to be handled in this manner. After you have read each case write a summary of what actions you, as the medical assistant, would take.

1. The morning has gone quite well so far and you have everything under control. The doctor will be in from morning rounds soon and you have the patients all organized and the equipment waiting in the treatment rooms. As you enter the waiting room you see one of your patients frantically trying to remove an object from her three-year-old son's throat. The boy has turned quite cyanotic and is not coughing but is struggling to breathe. Other patients in the waiting room are all crowded around and giving the woman all sorts of advice on what to do. What do you do?

2. Toward the end of the day you are feeling quite tired for it has been a busy day and now things seem to have calmed down. Sitting at the desk in the front office going over some charts you hear a commotion in the parking lot. You see many people crowding around one car. As you head through the door way you see a man lying on the pavement having tremendous muscular tremors and thrashing from side to side. Another man is bent over him trying to put his fingers in the man's mouth. What do you suppose has happened? What do you do?

ASSIGNMENT SHEET #3

3. It is almost lunch time and you can hardly wait. You grab your coat and start out the office door as a man brushes by you. He heads for the desk and just as he arrives he slumps over and falls to the floor. His color is very gray and you can see beads of perspiration over his face. The other patients in the waiting room are becoming very anxious. What do you do?

4. It's the flu, cold, and sore throat season again and the office is full of coughing, sneezing, and blowing of noses. Mary is in again and the physician has ordered more penicillin to be given. As you give the prescribed dose IM and give Mary instructions for home care you ask her to stay for a few minutes to make sure she has no reactions to the drug. Mary has told you that she has never had any allergies in her life. After a trip to the laboratory and several to the supply cabinet you go back to check on Mary. Mary is getting ready to go but you notice a strange flushing in her cheeks and a small area of rash on her neck. You ask Mary to sit back down and by this time she is complaining of profuse itching on her thigh. When you examine her thigh you find large red welts forming. Mary is becoming quite anxious as you examine her, asking over and over, "What's wrong with me?" What do you do?

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #1-CONTROL BLEEDING BY DIRECT PRESSURE

(NOTE: A victim may suffer shock and loss of consciousness from loss of blood. Because it is possible to bleed to death in a very short period of time, bleeding should be brought under control as soon as possible.)

I. Equipment

   A. Dressings, sterile or as clean as possible

      Examples: Prepared gauze dressings; clean handkerchief; clean articles of clothing

   B. Bandages

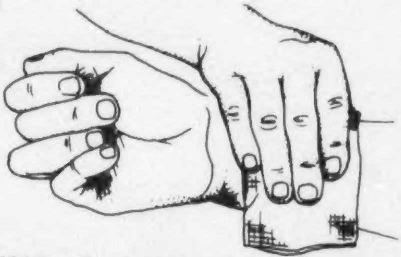
      Examples: Rolls of prepared gauze in different widths and lengths; strips of clean clothing

II. Procedure

   A. Apply dressing to area using firm pressure with hand (Figure 1)

      (NOTE: In some cases the bare hand has to be used until suitable dressing or compress can be found.)

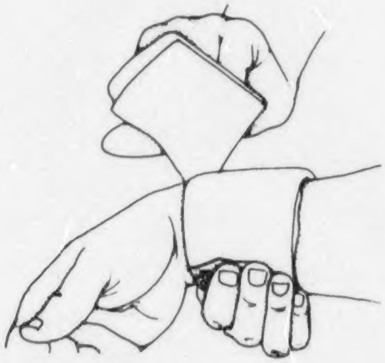
FIGURE 1



   B. Check frequently to see if bleeding has stopped or has slowed (Figure 2)

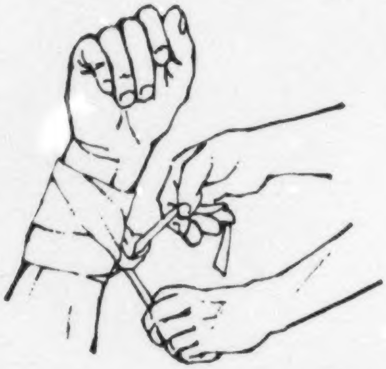
      (CAUTION: Do not disturb clots after they have formed. If blood soaks through cloth do not remove but add more layers of dressing.)

FIGURE 2



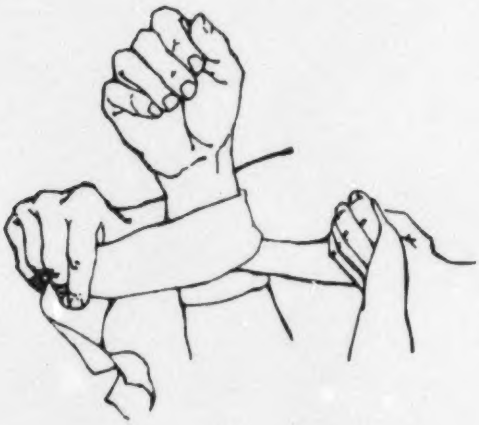
C. Apply a pressure bandage if bleeding is still active by holding the dressing in place with one hand, wrapping bandage directly over and around the injured area, and tying the knot over the wounded area (Figure 3)

FIGURE 3



(NOTE: Use firm motion but do not wrap too tightly or circulation will be impaired. See Figure 4.)

FIGURE 4



D. Elevate the limb, if possible, above the level of the victim's heart

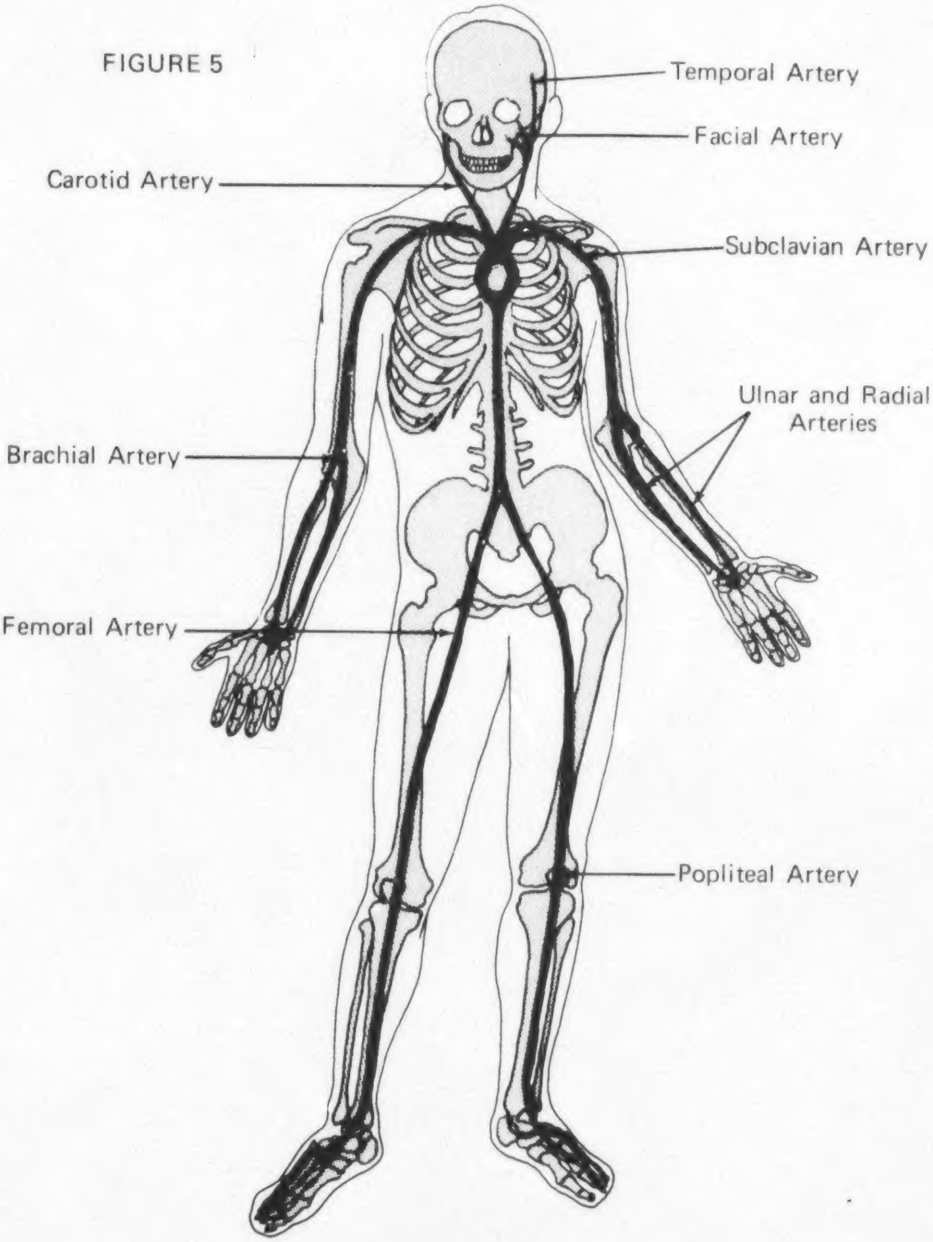
(NOTE: This can be done if no apparent fracture has occurred in that limb.)

JOB SHEET #1

E. Apply pressure on the main artery that supplies blood to the injured area if bleeding continues

(NOTE: Refer to diagram for pressure points to control bleeding in various areas. See Figure 5.)

FIGURE 5


Temporal Artery
Facial Artery
Carotid Artery
Subclavian Artery
Ulnar and Radial Arteries
Brachial Artery
Femoral Artery
Popliteal Artery

JOB SHEET #1

F. Apply a tourniquet only as a last resort; MAKE SURE that the victim will be seen by a physician as soon as possible

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #2--APPLY A TOURNIQUET

(CAUTION: Using a tourniquet is *dangerous.* In cases of severe hemorrhage that can't be controlled by other means, a tourniquet may be used. Once a tourniquet is applied, the patient must be seen by a physician as soon as possible. When a tourniquet is decided upon, consideration of the risk of losing a limb in order to save a life must be taken.)

I. Equipment

A. Strip of bandage or cloth at least two inches wide

B. Short strong stick or similar object that will not break

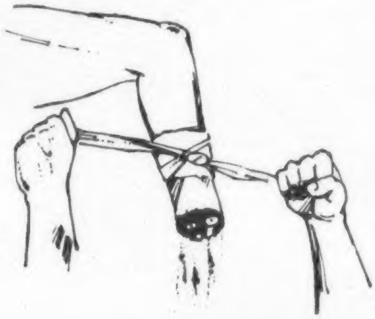
II. Procedure

A. Place tourniquet just above wound without touching wound areas

(NOTE: If injury is in joint area or just below, place tourniquet above joint.)

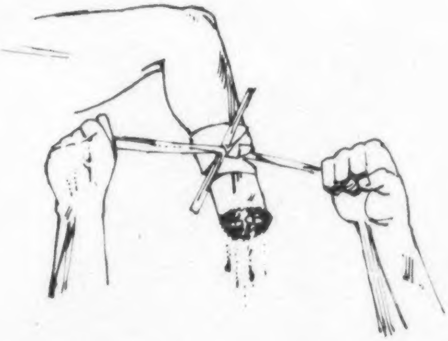
B. Wind cloth or bandage tightly around limb twice and tie a half knot (Figure 1)

FIGURE 1



C. Place a stick on overhand knot and tie two more knots on top of stick (Figure 2)

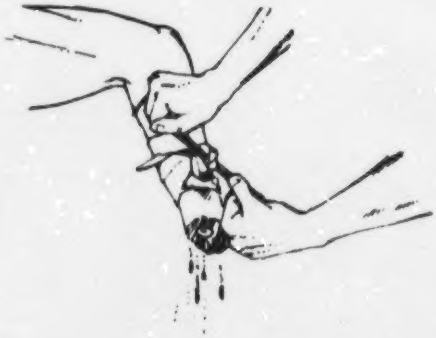
FIGURE 2



JOB SHEET #2

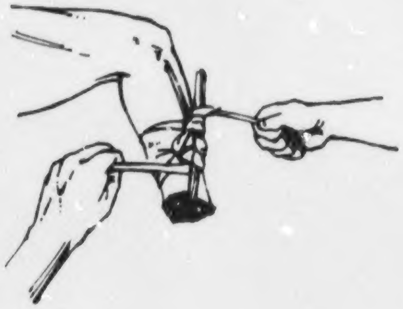
D. Turn stick to secure tourniquet until bleeding stops (Figure 3)

FIGURE 3



E. Fasten stick in place with loose ends of the tourniquet or a strip of cloth (Figure 4)

FIGURE 4



(CAUTION: DO NOT loosen a tourniquet once applied.)

F. Write a note telling the location of tourniquet and the time it was applied; fasten it to victim

G. DO NOT cover a tourniquet

(NOTE: *Again*, try all other alternatives before applying a tourniquet as this is a very dangerous procedure.)

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #3--USE HEIMLICH TECHNIQUE

(NOTE: Everyone should know how to perform this lifesaving technique. An obstruction blocking the trachea can cause brain damage or even death from lack of oxygen in a matter of minutes.)

I. Materials

  A. Self

  B. Patient

II. Procedure for standing

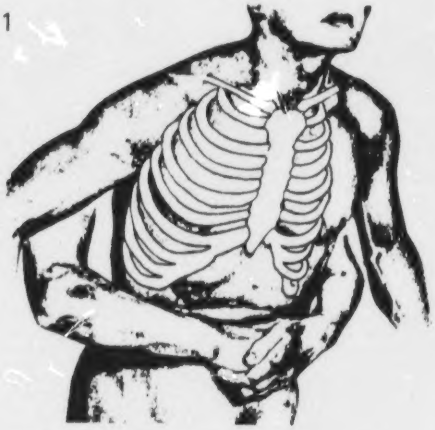
  A. Ask patient if they can speak

  B. Position yourself behind patient

  C. Wrap arms around waist, making fist with one hand

  D. Press thumb side against stomach, slightly above patient's navel (Figure 1)

FIGURE 1



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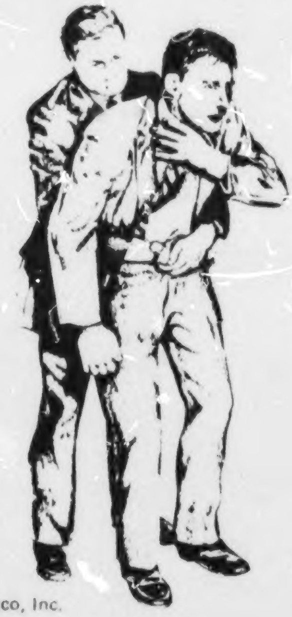
  E. Grasp fist with other hand

JOB SHEET #3

F. Press rapidly and strongly into stomach in an upward thrust, forcing diaphragm upward to expel object (Figure 2)

FIGURE 2



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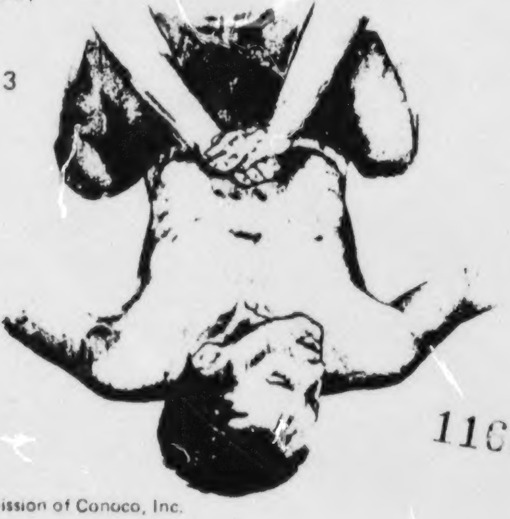
III. Procedure for floor

A. Place patient on back, face up

B. Position yourself in stride above patient's hips

C. Place one hand on top of the other in middle of stomach slightly above navel (Figure 3)

FIGURE 3



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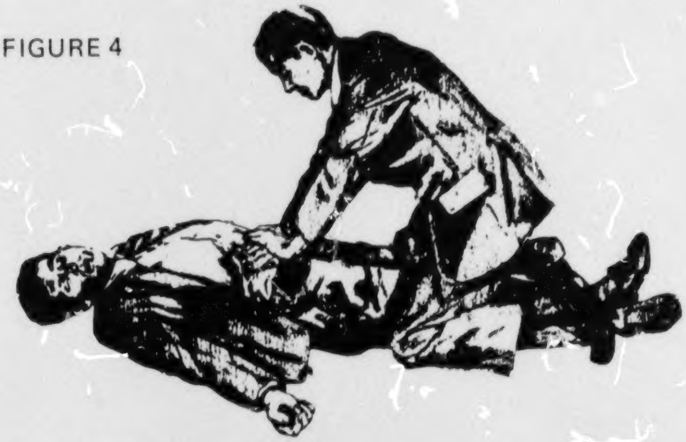
JOB SHEET #3

D. Press stomach with sudden upward thrust (Figure 4)

(NOTE: If possible, another person should assist in removing object. If another person is not available, use fingers to pull object out.)

FIGURE 4



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E. Turn patient on their side immediately if they vomit

F. Wipe patient's mouth

G. Give mouth-to-mouth resuscitation if needed

(NOTE: Call emergency medical service if needed.)

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #4--USE RESUSCITATOR BAG

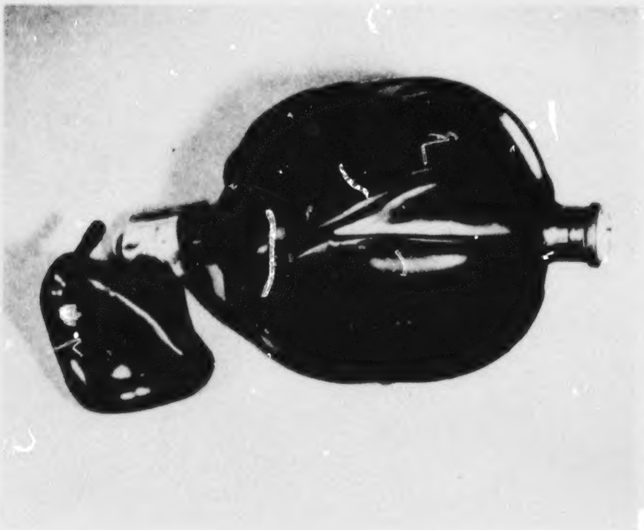
(NOTE: When available, the resuscitator bag is a more reliable method of giving a victim artificial respiration. The mask allows for a tighter fit, more air can be given and the person who is doing the resuscitating can be examining injuries and is not exhausted as when giving mouth to mouth. When an emergency occurs where there is a source of oxygen, the bag can be attached and the victim will receive even a better source of pure oxygen.)

I. Equipment

   A. Folded blanket, towel or coat

   B. Resuscitator bag (Figure 1)

FIGURE 1

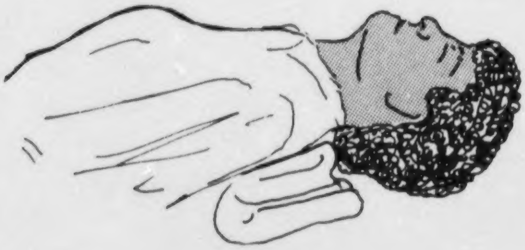


   C. Oxygen source, if available

II. Procedure

   A. Place victim on back with a rolled up blanket, towel, or coat under the shoulders (Figure 2)

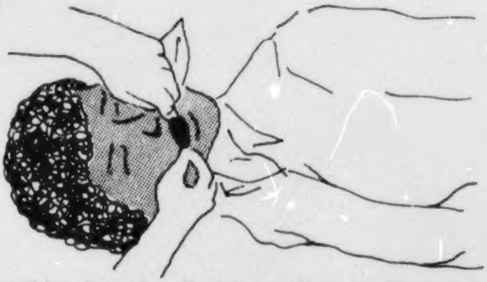
FIGURE 2



JOB SHEET #4

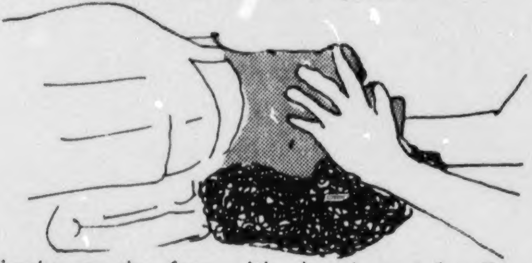
B. Clear the mouth and throat with a clean cloth with the head turned to one side (Figure 3)

FIGURE 3



C. Hyperextend the head back and pull chin up (Figure 4)

FIGURE 4

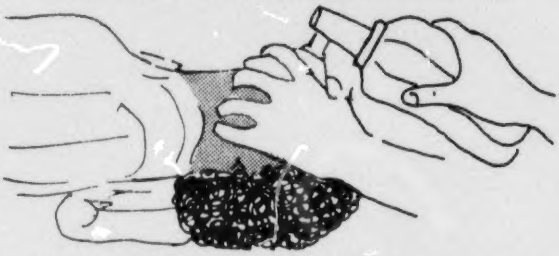


D. Hold the mask firmly on the face with thumb and forefinger, with the other fingers gripping the chin

E. Inflate bag by squeezing with the other hand (Figure 5)

(NOTE: This will inflate lungs and you will see the chest rise.)

FIGURE 5



F. Attach oxygen source to the bag at designated area and use as oxygen mask

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #5--PERFORM CPR (CARDIOPULMONARY RESUSCITATION)

(NOTE: CPR should be done by a qualified person who has been effectively trained. Many lives could be saved if everyone knew how to perform cardiopulmonary resuscitation.)

I. Equipment--To practice CPR, it is advisable to use the training mannequins that are actually equipped with "breathing" and "heartbeat" devices

(NOTE: These can be obtained from the Red Cross units or hospital inservice training programs.)

II. Procedure

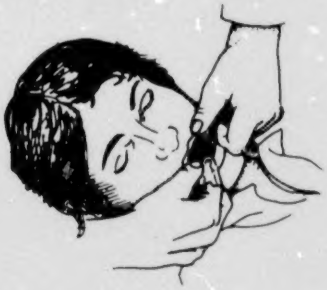
A. Establish open airway

(NOTE: The best accepted way to do this is mouth-to-mouth or mouth-to-nose method.)

1. Remove any foreign substance from the mouth (Figure 1)

(NOTE: If possible, use cloth to cover fingers.)

FIGURE 1

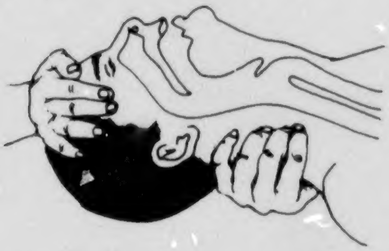


2. Position victim's head backward so that chin is pointing upward

3. Place one hand under victim's neck and lift; place heel of other hand on victim's forehead and move head backward (Figure 2)

(NOTE: In many cases this may open the airway and no other action would be needed.)

FIGURE 2



JOB SHEET #5

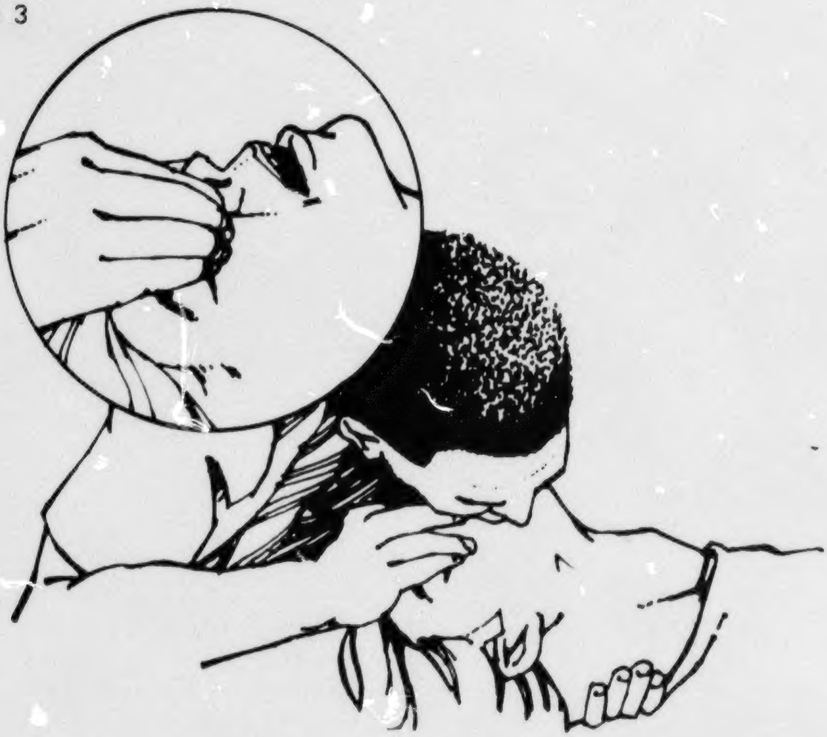
4. Hold victim's nostrils shut with the thumb and index finger of your hand that is on victim's forehead

   (NOTE: This will prevent leakage of air.)

5. Open your mouth widely, take a deep breath, and blow air into victim's mouth (Figure 3)

   (NOTE: Provide at least one breath every five seconds for adults, or twelve per minute.)

FIGURE 3



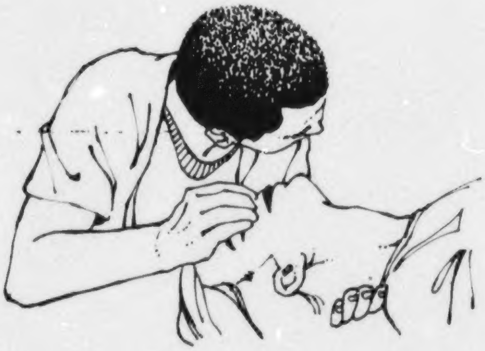
6. Check results by watching victim's chest to see if it rises and falls after breath

JOB SHEET #5

7. Stop blowing when victim's chest expands; turn your head to side and listen for exhaled air (Figure 4)

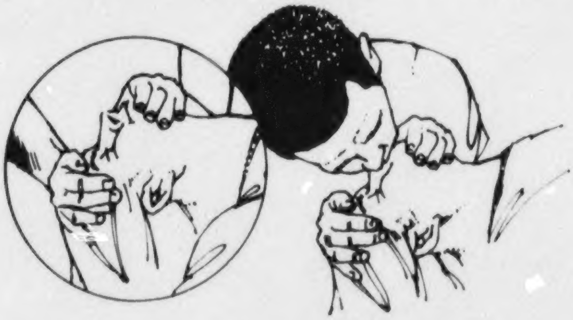
(NOTE: Make sure exhalation takes place.)

FIGURE 4



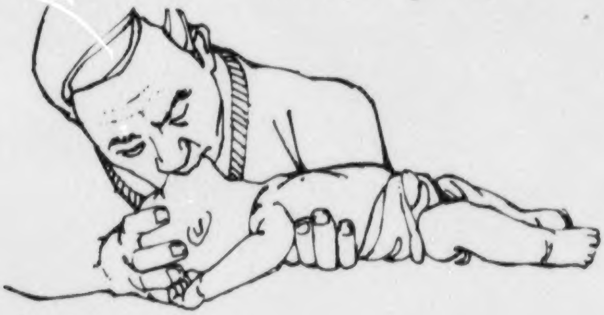
(NOTE: In some cases, it is necessary to use mouth-to-nose breathing. The backward tilt of head is used, but victim's mouth is closed. A tight seal is made by the mouth over victim's nose and air is blown in. For exhalation, the mouth is open to allow air to escape. See Figure 5.)

FIGURE 5



(NOTE: In infants or young children, the mouth and nose should be sealed by the mouth and a breath should be blown in every three seconds with less pressure and volume than used for the adult. Only small puffs need to be used for infants. See Figure 6.)

FIGURE 6



JOB SHEET #5

(CAUTION: If exchange is not being made, be sure to check for airway obstruction. If necessary, turn the adult to side and administer sharp blows between the shoulder blades to shake the material free. A child may be suspended for a moment by the ankles or turned upside down over one arm and given two or three sharp blows between the shoulder blades. See Figures 7 and 8.)

FIGURE 7

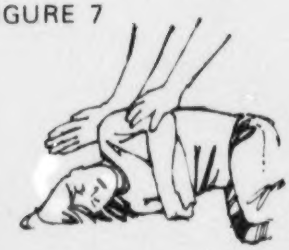
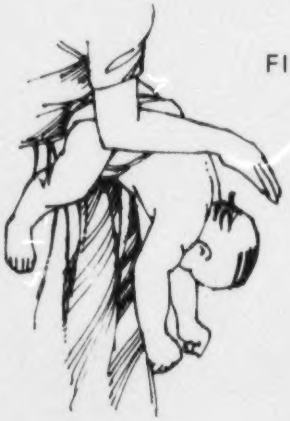


FIGURE 8



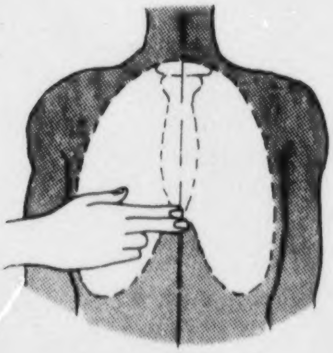
B. Begin external cardiac massage

(CAUTION: This procedure should also be practiced on one of the mannequins designed for CPR training.)

(NOTE: Artificial circulation can be provided by giving external cardiac compression that can force the heart to pump blood.)

1. Kneel at victim's side near chest
2. Locate the lowest part of the sternum (breast bone) called the xiphoid (Figure 9)

FIGURE 9



JOB SHEET #5

3. Place heel of one hand about 1 to 1 1/2" above that tip (Figures 10 and 11)

FIGURE 10

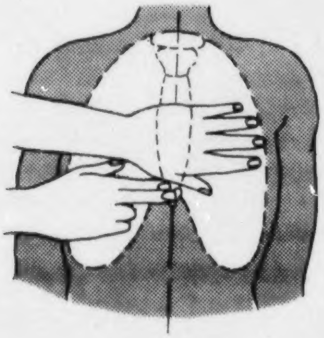
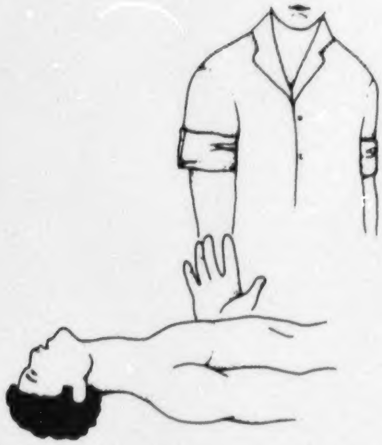


FIGURE 11



(NOTE: Make sure you use only the heel of the hand because to use all of the hand might exert more pressure than needed, resulting in injury to ribs.)

4. Place your other hand on top of the one that is in position; be sure to keep fingers off the chest wall (Figures 12 and 13)

(NOTE: Interlacing of fingers will keep this from happening.)

FIGURE 12

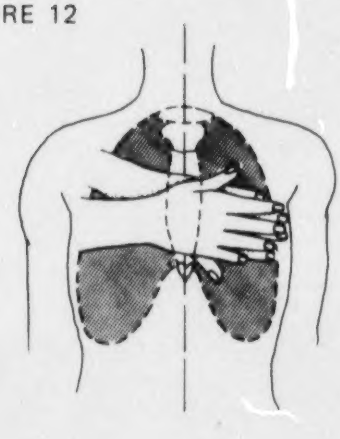
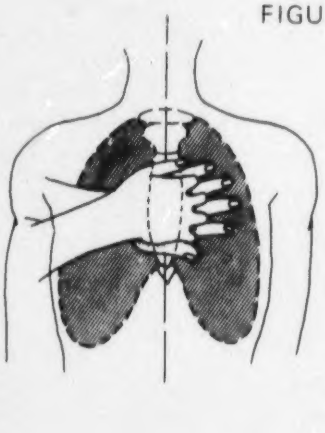


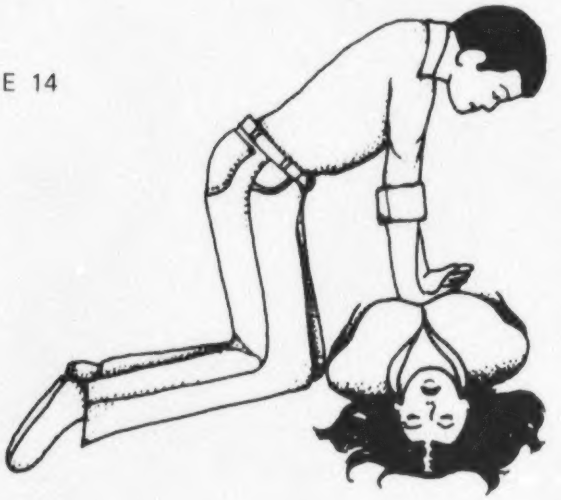
FIGURE 13



JOB SHEET #5

5. Bring shoulders directly over victim's sternum, keeping your arms straight, and compress downward (Figure 14)

FIGURE 14



6. Depress sternum about 1 1/2 to 2" for an adult victim

   (NOTE: Cardiac compression is different for small children and infants. Only one hand is needed for compression with the other hand slipped under the child's back for support. Use only tips of index and middle fingers for infants and depress mid-sternum 1/2 to 3/4" at a rate of eighty to one hundred times a minute. For small children, use the heel of one hand and depress 3/4 to 1 1/2" at a rate of eighty to one hundred times per minute. Breaths should be given after every fifth compression.)

7. Without removing your hands from the victim's body, relax after each compression using a rhythmical, rocking motion, allowing chest to return to normal position after compression

   (NOTE: If you are the only rescuer, you have to provide breathing and cardiac compression. Use the ratio fifteen cardiac compressions to two breaths. The rate of compressions should be approximately eighty times per minute. If there are two rescuers, the ratio should be five cardiac compressions to one breath and rate of cardiac compressions should be approximately sixty per minute. Check the carotid artery occasionally for sign of a returned pulse.)

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #6--PREPARE FOR NASOGASTRIC TUBE INSERTION

(NOTE: There are many reasons why a nasogastric tube will be inserted, but for an emergency case it will usually be for lavage. As a medical assistant you will not be inserting the tube but you must be prepared to have everything ready and be prepared to assist. There will not be time to rummage through cabinets looking for equipment after the procedure begins.)

I. Equipment

  A. Nasogastric tube

  (NOTE: Usually a French size 12 to 18 tube is used but the person inserting the tube will usually determine which size to use.)

  B. Penlight or flashlight

  C. Two emesis basins, one with crushed ice

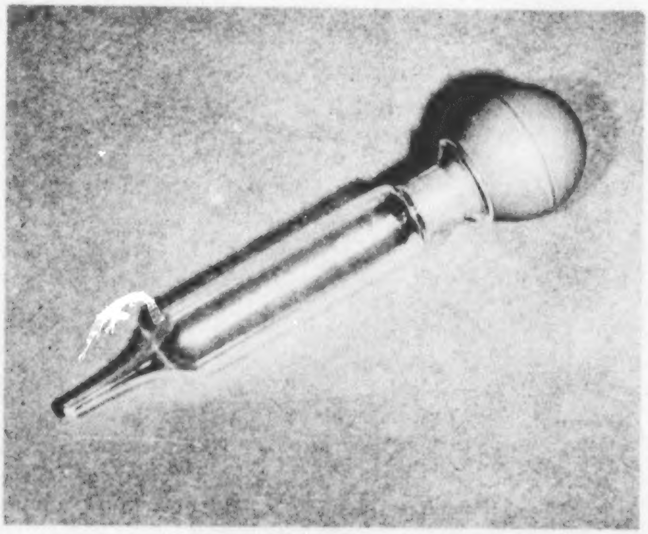
  D. Clamps

  E. Cup of water with straw or cup of crushed ice and spoon

  (NOTE: Either can be used at the time of insertion to help the patient to assist in swallowing the tube.)

  F. Bulb syringe (Figure 1)

FIGURE 1



JOB SHEET #6

G. Towels

H. Water-soluble lubricating jelly

I. Gauze pads

J. Non-allergenic tape

K. Small rubber band

L. Safety pin

M. 120 to 150 cc's of tap water or normal saline

N. Antidote if ordered

II. Procedure

A. Wash hands

(NOTE: This is not a sterile procedure but contamination should be avoided.)

B. Collect all equipment

C. Obtain the correct size and type of tube requested

D. Place the tube, if very limp, in the basin of ice until time of insertion

(NOTE: Many of the new plastics are rather rigid, so it may be too stiff for gentle insertion. In this case, place the tube in a basin of warm water for several minutes.)

E. Place towels over the patient's chest and around neck

F. Hand several tissues to patient as procedure sometimes causes tearing

G. Place an emesis basin nearby in case vomiting should occur

H. Be prepared to hand the person who will be doing the procedure the proper equipment

Examples: Penlight or flashlight to check nasal patency, nasogastric tube, clamp, bulb syringe

I. Place a small amount of the lubricant on a gauze square and prepare to lubricate the tip of the tube if requested

J. Feed the patient small spoonfuls of ice or assist in giving small sips of water as the person inserts the tube, if needed

JOB SHEET #6

K. Cut small strips of tape to be used to secure the tube to the patient's nose

L. Assist in measuring and keeping track of the amount of fluid used in the lavaging process and the amount of the return

(NOTE: It is very important that the fluid returned be saved for observation and if necessary, analysis by the laboratory.)

M. Comfort patient throughout procedure

(NOTE: This may be a particularly stressful procedure for the patient physically and emotionally. Pay close attention to what the patient is telling you especially if you suspect an intentional overdose case.)

N. Clear equipment away after procedure; dispose of equipment that will not be used again; clean equipment with proper solutions if it will be used again

O. Wash hands

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #7--APPLY DRESSINGS AND BANDAGES

(NOTE: Treatment before dressings and bandages are applied differs according to the condition of the wound and the physician's preference. The wound is cleaned very carefully with either a soapy solution or antiseptic solution or both. If wound is to be sutured or butterfly dressings are to be applied shaving of the hair around the area may be done. You will be treating the area with the procedure ordered by the attending physician, so follow his/her directions.)

I. Equipment

  A. Dressings, gauze or cloth

    (NOTE: Sterile dressings need to be used if possible; if not available, freshly laundered cloths, such as handkerchiefs, towels, sheets, pillowcases, or napkins, may be used.)

  B. Bandages

    1. Gauze, usually found in rolls of ten yards and one, two, or three inches in width

       (NOTE: Manufacturers have developed a type of bandage that clings or holds to dressing more securely than the older type.)

    2. Elastic in various widths and lengths

    3. Triangular bandages, usually of muslin to be used as slings or folded for absorbent pressure pads

       (NOTE: Bandages can be held in place with adhesive, plastic or masking tape, paper tape, safety pins, or clips. Gauze and muslin bandages can be split and tied.)

    4. Roller bandages, a long strip of material 1/2 to 6 inches wide and rolled tightly

    5. Tubular dressings applied with a device threaded with gauze that can be applied to areas with varying circumferences that fit neatly and with the right amount of tension

  C. Adhesive strips

    (NOTE: Adhesive strips can be obtained in most any size. They are a good wound cover as they are sterile, have non-stick gauze pads, and an adhesive strip to secure the covering. Many of the adhesive strips are medicated with an appropriate antibacterial substance.)

JOB SHEET #7

D. Butterfly bandages

(NOTE: These are strips of adhesive with a narrow section of non-stick pads that are used to close wounds that do not need to be sutured but need to be supported until healing takes place. They can be manufactured or made from adhesive strips.)

II. Procedure

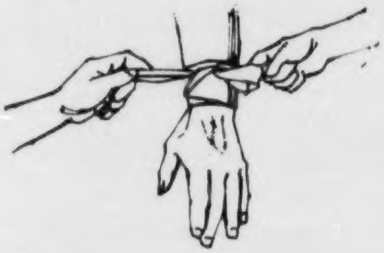
(NOTE: A bandage should be snug over a dressing but not tight enough to interfere with circulation. Be sure to watch for swelling, changes of color and coldness of tips of fingers or toes, and listen for complaints of numbness or tingling.)

A. Circular bandaging

(NOTE: Gauze, cloth, or elastic wrap may be used to secure dressing.)

1. Position dressing and anchor the bandage
2. Wrap the area by encircling each layer with the next on top
3. Secure by tape, pins, clips, or splitting and tying a knot (Figure 1)

FIGURE 1

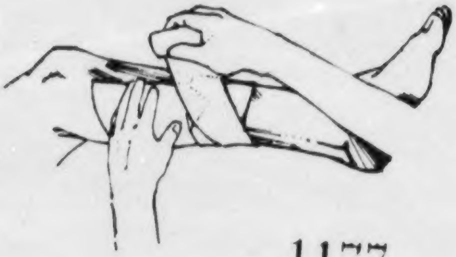


B. Spiral bandaging

(NOTE: Gauze, cloth, or elastic wrap may be used to secure dressing.)

1. Anchor bandage over dressing (Figure 2)

FIGURE 2

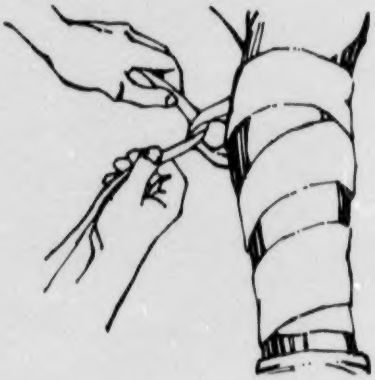


JOB SHEET #7

2. Encircle the area by making spiral turns of the bandage moving around the limb until dressing is covered

3. Secure the bandage by tying it off if possible; this makes it more supportive than tape or clips; if using an elastic wrap, clips can be used effectively (Figure 3)

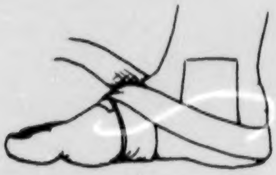
FIGURE 3



C. Figure-eight bandage for ankle

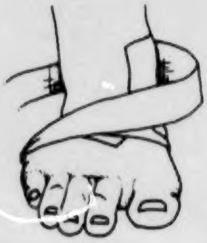
1. Position the bandage end under the instep of the foot and make two or three additional turns around the foot (Figure 4)

FIGURE 4



2. Bring the bandage up across the foot, then around the ankle, downward across the front of the foot, and across under the arch (Figure 5)

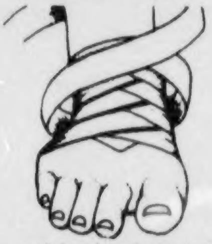
FIGURE 5



JOB SHEET #7

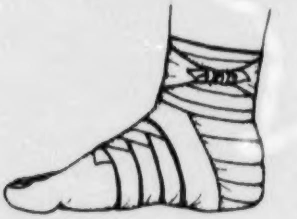
3. Make several of the figure-eight turns, each turn overlapping the previous one by about two-thirds the width of the bandage; to give more support give two occasional turns around the ankle (Figure 6)

FIGURE 6



4. Tie off ends or use clips with elastic bandage (Figure 7)

FIGURE 7



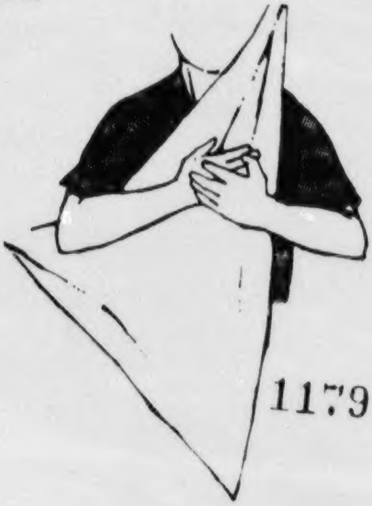
(NOTE: This type of bandage is effective for ankles and wrists. It is quite supportive to the injured limb.)

D. Triangular sling

(NOTE: Triangular cloth needs to be approximately 55" across the base and from 30" to 40" along the sides. These can be bought from a manufacturer or can be homemade from towels or sheets.)

1. Place one end of the triangular cloth over the uninjured shoulder and let the other end hang down in front of the chest, parallel to the body (Figure 8)

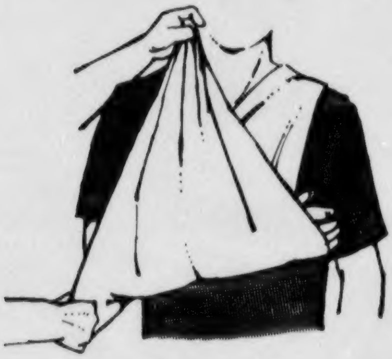
FIGURE 8



JOB SHEET #7

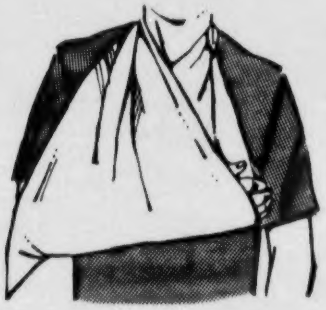
2. Put pointed end behind the elbow of injured arm (Figure 9)

FIGURE 9



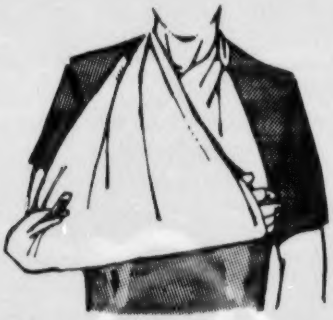
3. Pull the second end of the bandage up over the shoulder and tie the two ends together at the side of the neck; do not tie over the spine (Figure 10)

FIGURE 10



4. Carry point of cloth forward and pin it to the front of the sling (Figure 11)

FIGURE 11

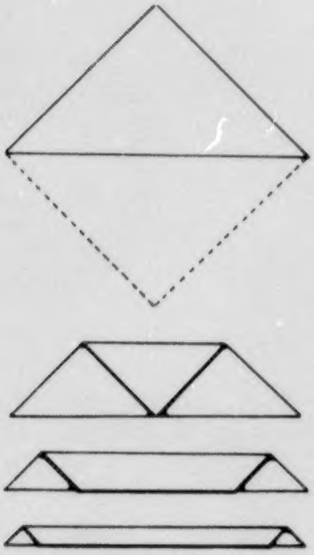


JOB SHEET #7

E. Triangular folded as cravat

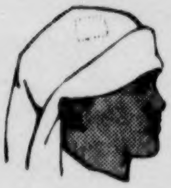
1. Fold triangular bandage (Figure 12)

FIGURE 12



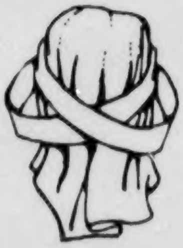
(NOTE: For scalp and forehead injuries, leave the point hanging down the victim's back. See Figure 13.)

FIGURE 13



2. Carry the two ends around the head above the ears and cross them just below the bump at the back of the head (Figure 14)

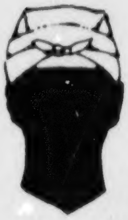
FIGURE 14



JOB SHEET #7

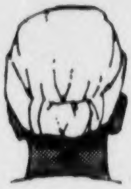
3. Carry the ends securely to the front of the head and tie over the forehead (Figure 15)

FIGURE 15



4. Pick up the point of the bandage at the back of the head and tuck it securely into the bandage (Figure 16)

FIGURE 16



(NOTE: The triangular bandage can be folded to fit many different areas and can be secured quite firmly. See Figures 17, 18, 19, and 20.)

FIGURE 17

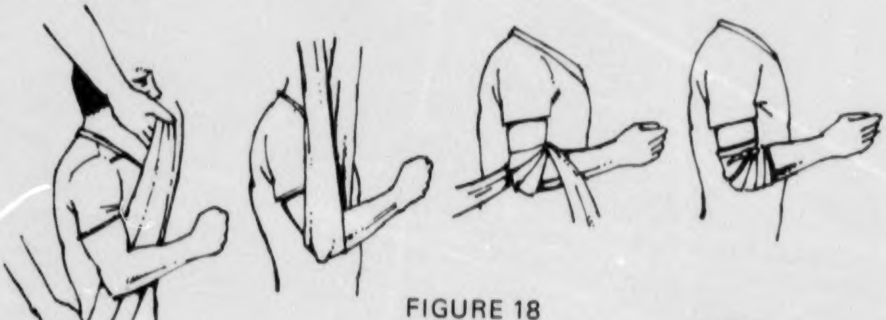


FIGURE 18

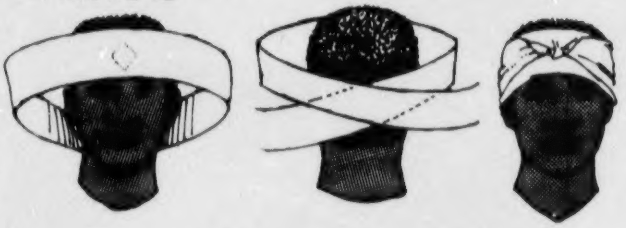


FIGURE 19

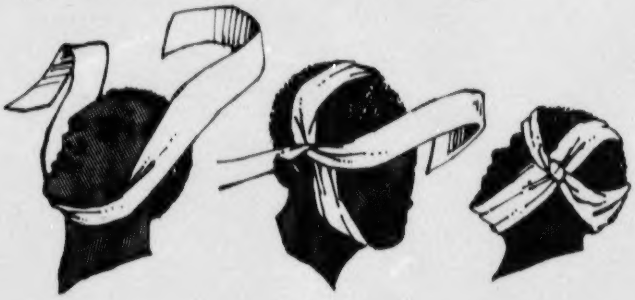
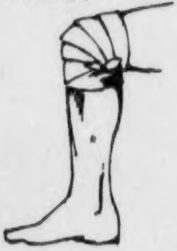


FIGURE 20



EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #8--APPLY A SPLINT

(NOTE: Many splints are commercially made but in emergency situations, many materials can be used to support injured area while victim is being transported. A new concept is the inflatable splint made of plastic material that is placed around injured area and filled with air to support limb.)

I. Equipment

   A. Blankets or towels

   B. Strips of cloth, towels, or sheets torn into strips

   C. Straight sticks or smooth pieces of wood

   D. Rolled up newspapers

   E. Pillows

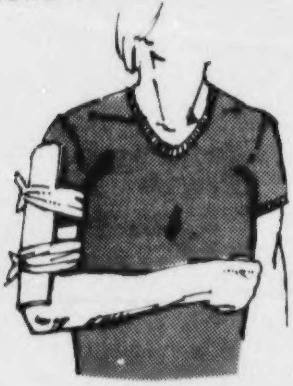
II. Procedure

   (NOTE: When a fracture is suspected, do not try to move the victim or try to put bone fragments back into place. Do try to keep the victim in good body posture. Signs of fracture may be obvious deformities, swelling, discoloration, pain, or tenderness to touch. If there is an open fracture, there will be obvious bone parts protruding. If in doubt about a fracture, assume there is one and treat with care.)

   A. Splints for broken arms

      1. Place an arm in as comfortable position as possible without trying to replace bone fragments (Figure 1)

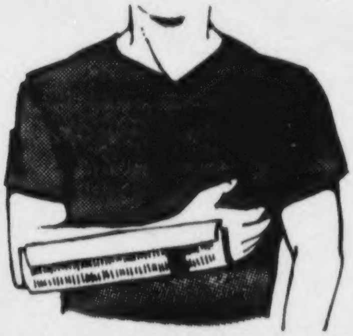
FIGURE 1



JOB SHEET #8

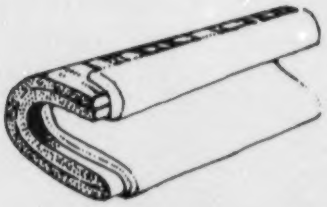
2. Support fracture area with cardboard, small board, or rolled up newspapers (Figure 2)

FIGURE 2



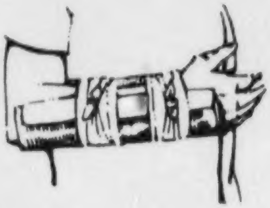
(NOTE: If possible, pad injured limb with soft clean coth. See Figure 3.)

FIGURE 3



3. Secure with strips of cloth and tie double knots (Figure 4)

FIGURE 4



4. Support whole arm with sling

B. Splints for broken legs

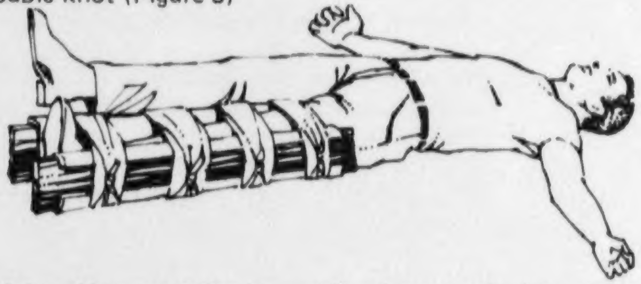
1. Place leg in as straight a position as possible

2. Use splints of wood or blanket roll to keep leg from moving, being sure not to constrict circulation

JOB SHEET #8

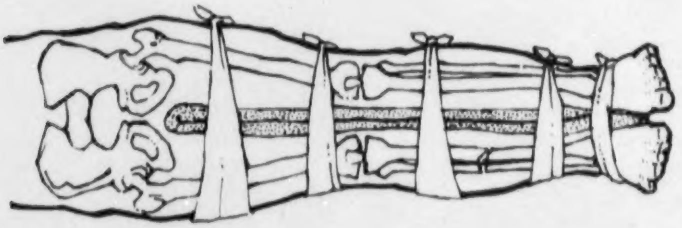
3. Secure the splint by wrapping strips of cloth around splint and leg and trying a double knot (Figure 5)

FIGURE 5



4. Use the uninjured leg as a splint by padding between the legs with a soft cloth and securing it to the injured leg by strips of cloth tied with double knots (Figure 6)

FIGURE 6

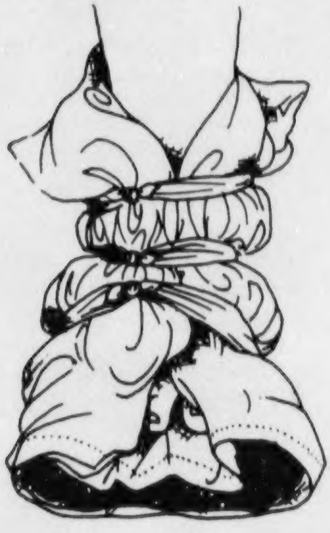


C. Splint for broken ankle and foot

1. Remove shoe and sock if possible

2. Splint with a pillow or blanket and secure with strips of cloth (Figure 7)

FIGURE 7



JOB SHEET #8

3. Apply cold compresses if swelling has occurred

D. Splint for fractured back or neck

(CAUTION: Do not attempt to move victim or try to lift any body part until adequate help arrives. Use some type of support for whole body if available. Use car door, seat, or hood if available to transport victim. Be sure that body is fully supported by adequate assistance. If none is available, it is better to wait until qualified medical help with special equipment arrives.)

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #9--EXAMINE EYES

(NOTE: When eyes are examined in an emergency situation you must act quickly but using gentle and calm procedures. Foreign bodies in the eye is a major cause for emergency treatment but you may be dealing with other conditions and need to use this method for examining the eyes.)

I. Equipment

   A. Cotton swabs

   B. Small flashlight

II. Procedure

   A. Wash hands

   B. Explain procedure to patient

      (NOTE: It is difficult for many persons to have their eyes examined and this may promote anxiety. Reassure them and tell them to relax as much as possible.)

   C. Seat patient in a well-lighted area facing you

   D. Evert the lower eyelid by gently pulling it down over the lower orbital rim

      (CAUTION: Use very gentle pressure and do not use fingernails.)

   E. Have patient look up, down, right and left

   F. Examine the condition including color, tissue, and discharge

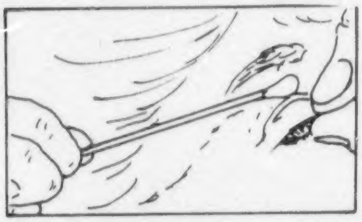
   G. Ask patient to look down

   H. Grasp upper eyelid and eyelashes

   I. Pull the lashes down and forward

   J. Place a cotton swab using other hand on top of the eyelid just above the fold (Figure 1)

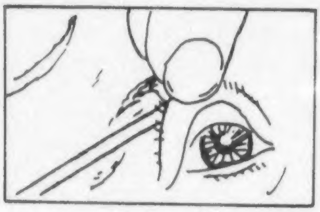
FIGURE 1



JOB SHEET #9

K. Roll the eyelid up over the swab and with one finger press the eyelashes against the upper orbital rim (Figure 2)

FIGURE 2



L. Examine carefully

M. Have patient look up while you pull forward on eyelashes and gently let the eyelid close

N. Examine other eye

(NOTE: Depending on your findings, procede to appropriate treatment. If the condition requires irrigation as in a loose foreign object you may use the next job sheet.)

EMERGENCIES AND FIRST AID
UNIT VI

JOB SHEET #10–IRRIGATE EYES

I. Equipment

   A. Bulb syringe

   B. Prescribed solution at room temperature

      (NOTE: Unless physician requests specific solution, normal saline can be used.)

   C. Emesis basin

   D. Towels

   E. Gauze pads or cotton

   F. Local anesthetic (optical)

II. Procedure

   A. Wash hands

   B. Identify patient and explain procedure

   C. Position patient on affected side with towel draped around neck

      (NOTE: This is done so that the contaminated fluid does not run from affected eye into good eye.)

   D. Moisten one of the sterile gauze pads with sterile saline and clean any debris from eyelid if there is no foreign object in eye

      (CAUTION: Always wipe from inner to outer canthus to prevent contamination. If you suspect a foreign object in eye do not press on eyelid as that may cause the object to imbed.)

   E. Instill a local anesthetic (optical) if ordered

      (NOTE: In many controlled emergency areas the local anesthetic is instilled into the eye. This is done for the comfort of the patient because the normal saline is irritating and burns because of the salt content. In a critical situation irrigation can be done with a water fountain, hose, or faucet if needed.)

   F. Use thumb and index finger to open the eyelids

JOB SHEET #10

G. Hold bulb syringe in the other hand and squeeze gently to direct a stream of fluid into the inner canthus of the eye

(CAUTION: Do not touch the tip of the syringe to the eye.)

H. Save the piece of foreign object if this is what has caused the condition

I. Pat sterile gauze pad gently over the eyelid and face

J. Chart procedure, ask physician to examine eye further

(NOTE: If this emergency occurs outside a medical office and must be taken care of immediately do not hesitate to use a water fountain or water faucet. Flush the eye for at least 15 minutes especially if condition is caused from a caustic substance.)

EMERGENCIES AND FIRST AID
UNIT VI

TEST

NAME______________________________ SCORE______________

1. Match terms associated with emergencies and first aid to the correct definitions. Place the correct numbers in the blanks provided.

_____a. Cut or wound made with sharp instrument

_____b. Decrease in amount of oxygen and increase in amount of carbon dioxide in the body as a result of some interference with respiration

_____c. Tearing away forcibly of body part or tissues

_____d. Scraping away of a portion of skin or mucous membrane as a result of injury or by mechanical means; bleeding is slight and usually consists of slow oozing with the only danger being infection

_____e. Wound or irregular tear of flesh

_____f. Protective cover placed over wound

_____g. Abnormal internal or external discharge of blood; external symptom is obvious blood flow and internal symptom is shock

_____h. Internal or external break in soft parts of body tissues; caused by trauma or violence to areas of body

_____i. Injury in which skin is not broken

_____j. Agent which induces vomiting

_____k. Substance that may affect body or mind when taken into the body or applied to its surface

_____l. Strip of woven material used to hold dressing or splint in place; helps to immobilize, support, and protect injured body part

_____m. Sudden, severe attack of illness

1. Asphyxiation
2. Hemorrhage
3. Abrasion
4. Incision
5. Laceration
6. Wound
7. Avulsion
8. Contusion
9. Dressing
10. Drug
11. Emetic
12. Stroke
13. Bandage

______n. Device that immobilizes injured part when fracture is suspected

______o. Breaking of a bone

______p. Condition resulting from ineffective circulation of blood and oxygen; characterized by symptoms of marked decrease in blood pressure, rapid pulse, and decreased kidney function

______q. Injury to muscle resulting from overstretching

______r. Importance of an action relative to other possible actions

______s. Involuntary attack causing victim to lose consciousness

______t. Any substance which interferes with normal physiological functions when taken into the body orally, or when inhaled, injected, or absorbed through the skin

______u. Substance which neutralizes poisons and their effects

______v. Trauma to a joint which causes pain and disability; may even result in torn ligaments

______w. Freezing or effect of extreme cold on parts of the body

______x. Sensation that may precede an epileptic seizure by several hours or only by a few minutes; warns victim of attack

______y. Hypersensitive reaction of the body to a foreign protein or drug; symptoms range from mild skin reactions to shock state

______z. Sorting out or classification of casualties to determine priority of needs and place of treatment

______aa. To wash out or irrigate

14. Priority
15. Strain
16. Sprain
17. Shock
18. Poison
19. Antidote
20. Frostbite
21. Fracture
22. Convulsion
23. Splint
24. Aura
25. Anaphylaxis
26. Triage
27. Lavage

2. Name reasons knowledge of first aid is important.

a. ______________________________

b. ______________________________

c. ______________________________

3. Discuss why first aid training is needed.

____

____

____

____

4. Arrange in order actions to take when giving first aid. Place a "1" before the first step, a "2" before the second step, and so on in the blanks provided.

______a. Observe pupil reactions of the eyes

______b. Check breathing

______c. Begin definite first-aid treatment for symptoms

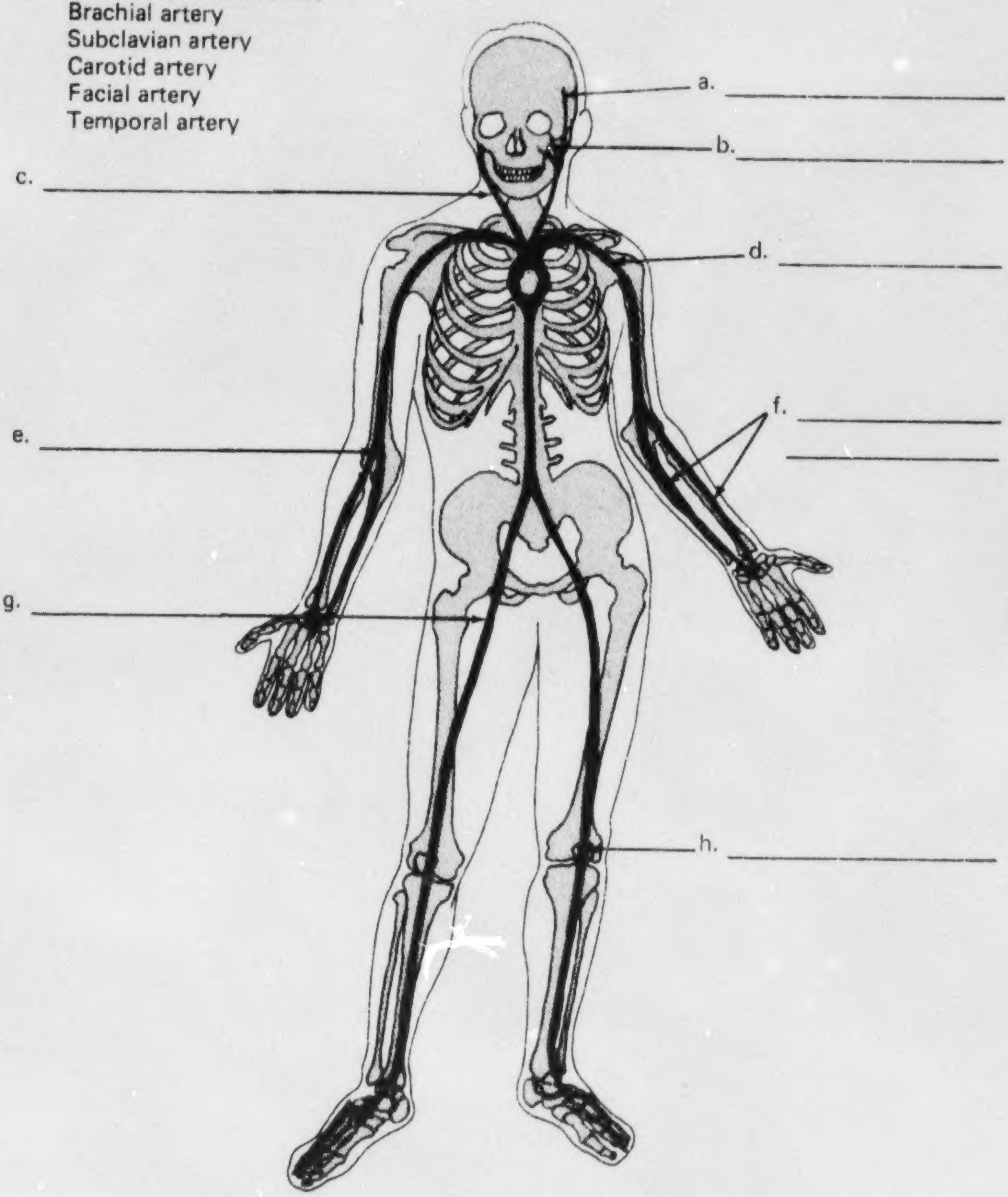
______d. Observe overall emergency

______e. Check alertness level, if victim is conscious, by asking questions about physical status

______f. Check pulse or heartbeat

5. Identify major vessel pressure points to be used when attempting to control bleeding. Write the correct terms in the blanks provided.

Popliteal artery
Femoral artery
Ulnar and radial arteries
Brachial artery
Subclavian artery
Carotid artery
Facial artery
Temporal artery



6. Match major vessel pressure points used to control bleeding to the correct areas of the body. Place the correct numbers in the blanks provided.

_____a. Scalp

_____b. Foot

_____c. Thigh wounds

_____d. Hand wounds

_____e. Lower leg

_____f. Neck wound

_____g. Face

_____h. Lower arm

_____i. Upper arm or shouler

_____j. Elbow or lower arm

1. Temporal artery
2. Femoral artery
3. Arteries of the ankle
4. Ulnar and radial arteries at the wrist
5. Popliteal artery
6. Ulnar and radial arteries
7. Carotid artery
8. Facial artery
9. Subclavian artery
10. Brachial artery

7. Describe care given to a victim with a bite wound.

____

____

____

____

____

____

____

8. Select from the following list factors to consider when treating a victim with an eye injury. Mark each correct answer with an "X."

_____a. Remove foreign object immediately using any available instrument

_____b. Do not let victim rub eye

_____c. Put victim in chair

_____d. Cover eye with a clean dressing if foreign object is lodged in eye and cannot be removed easily with flushing of water or by gently placing a clean, wet cloth near object and allowing it to adhere to cloth; do not use pressure

9. Select from the following list symptoms to observe for brain damage. Mark each correct answer with an "X."

   ______a. Convulsions

   ______b. Bleeding from nose, ear canal, or mouth

   ______c. Pupils equal in size

   ______d. Clear speech patterns

   ______e. Consciousness

   ______f. Incontinence

10. Distinguish between types of treatment given for ingestion of poisonous substances. Write the correct type of poison in the blanks provided.

   ____________________a. Give appropriate antidote; induce vomiting by a variety of methods

   ____________________b. Neutralize substance with a dose of milk by magnesia and a glass of diluting fluid, such as milk or water; do not induce vomiting

11. Select from the following list factors to consider in treatment of shock. Mark each correct answer with an "X."

   ______a. Get medical help as soon as possible

   ______b. Help victim sit up immediately

   ______c. Cover victim completely

   ______d. Give victim fluids immediately

   ______e. Maintain adequate supply of oxygen (O_2)

12. Describe first aid given for contact poisoning.

   ____

   ____

   ____

   ____

   ____

13. Select from the following list major causes of poisoning. Mark each correct answer with an "X."

   ______a. Drug overdoses

   ______b. Use of home remedies

______c. Use of artificial or synthetic substances

______d. Medicines left within reach of children

______e. Natural food products

______f. Improper use of poisonous spray substances

______g. Poisonous substances taken from original labeled containers, and put into common household containers

14. Select from the following list causes of respiratory failure. Mark each correct answer with an "X."

______a. Allergic reactions

______b. Atmospheric balance

______c. Fainting

______d. Obstruction by foreign object

______e. Respiratory tract disorders

______f. Excessive smoking

15. Arrange in order actions to take when a victim is bitten by a poisonous snake. Place a "1" before the first action, a "2" before the second action, and so on in the blanks provided.

______a. Apply ice pack, if possible

______b. Apply a constricting band tightly enough to slow circulation, but not tightly enough to cut it off completely

______c. Keep victim as quiet as possible with affected area lower than the victim's heart

16. Match terms associated with drugs and their use to the correct definitions. Place the correct numbers in the blanks provided.

______a. Drugs used to increase mental activity and to offset exhaustion

______b. Volatile substances that, when purposely breathed, cause an intoxicated feeling

______c. Excessive or persistent use of a drug without medical regulaton

______d. Drugs which depress the central nervous system and are usually habit-forming; controlled by government

______e. Use of drugs for effects or conditions for which they are not properly suited, or for correct purposes but administering or taking an incorrect dose

1. Drug misuse
2. Drug abuse
3. Narcotics
4. Inhalants
5. Stimulants (uppers)

_____f. Drugs which depress nervous system and body functions, producing relaxation and sleep

_____g. Drugs used to reduce mental stress and excitement without interfering with normal mental activity

_____h. Drugs that produces bizarre mood changes which produce disturbances of thoughts, emotions, and sensations, illusions, and delusions

_____i. Compulsive desire to take a drug to experience its effect or to avoid discomfort in its absence

6. Tranquilizers
7. Drug dependence
8. Depressants
9. Hallucinogens

17. Complete the following chart on symptoms and treatments for types of drug overdose or abuse. Write the correct information in the blanks provided.

DRUG	SYMPTOMS	TREATMENT
Alcohol	Feelings of exhilaration but reduced mental and physical alertness; in severe stages, decreased respirations and possible coma	a.____________________
Marijuana	b.____________________	No emergency treatment unless victim is very disoriented and has psychotic reaction
c.______________	Decrease in breathing possibly resulting in coma; reduction of mental and physical activity; possible death when mixed with alcohol	Maintain body temperature and open airway; get victim to hospital at once
Hallucinogens	d.____________________	Talk the person down in calm tones; transport to hospital as soon as possible
e.______________	Irritation of respiratory tract, unsteadiness; excitement at first, then depression that can lead to unconsciousness	If bag has been used, remove at once; give respiratory assistance if breathing has stopped and get to hospital immediately

DRUG	SYMPTOMS	TREATMENT
Narcotics	Reduction in activity and awareness, decrease in breathing, profuse sweating, fall in temperature, constriction of pupils, nausea and vomiting, sleep, and possible coma	f.____________________
Stimulants	g.____________________	Protect from injury; maintain open airway and normal body temperature; obtain help for psychiatric disorders
h.________________	Decrease in body temperature, blood pressure; respiratory depression; deepening state of unconciousness	Arouse the victim; maintain open airway and get victim to hospital as soon as possible

18. Classify burns by degrees. Place a "1" before characteristics of first degree burns, a "2" before second degree burns, and a "3" before third degree burns in the blanks provided.

______a. Blistering

______b. Rapid healing

______c. Mottled or red areas

______d. Charred or a white casted appearance

______e. Damage extending into the first layer of tissue

______f. Redness or discoloration

______g. Mild swelling and pain

______h. Pain greater than first degree

______i. Considerable swelling

______j. Deep tissue destruction

______k. Wet appearance of burned area due to loss of plasma

______l. Less pain due to nervous tissue destruction

19. Match degrees of burns to the correct treatments. Place the correct numbers in the blanks provided.

______a. Submerge the part in cold but not ice water until pain subsides; blot dry gently and apply dry sterile dressings; do not break blisters and do not use any antiseptic ointments, sprays, or home remedies on burned area

______b. Apply cold water or submerge burned area in cold water; apply a dry dressing if necessary

______c. Cover burns with thick sterile dressings, but do not immerse in water; do not remove any tissue or burned clothing; transport victim to hospital as quickly as possible

1. Third degree
2. First degree
3. Second degree

20. Select from the following list signs and symptoms of a heart attack. Mark each correct answer with an "X."

______a. Disturbance of speech

______b. Shock symptoms (in most cases)

______c. Shortness of breath

______d. Bleeding from nose, ear canal, or mouth

______e. Persistent chest pain, usually under the sternum, which frequently radiates to one or both shoulders or arms, and to the neck, jaw, or both

______f. Convulsions

______g. Rash

______h. Cyanosis or pallor of lips, skin, and nail beds

______i. Painful urination

21. Select from the following list signs and symptoms of fainting. Mark each correct answer with an "X."

______a. Bleeding

______b. Nausea

______c. Vertigo

______d. Temperature

______e. Extreme pallor

______f. Visual disturbances

______g. Chest pain

______h. "Cold sweats"

______i. Numbness and tingling of extremities

22. Match types of seizures to the correct descriptions. Place the correct numbers in the blanks provided.

______a. Often preceded by a sensation called an *aura*; victim becomes unconscious; muscle spasms occur; salivation increases; coma-like state occurs

______b. Seizure activity consists of periods of momentary unconsciousness; eyes will stare, then blink; usually lasts only a few seconds each time

______c. Seizure activity is limited to one side of the body or various groups of muscles

1. Grand mal
2. Petit mal
3. Jacksonian

23. Determine priority of care in emergency situation.

24. Describe treatment for poisonous insect bites.

25. Handle emergencies in the medical office.

26. Demonstrate the ability to:

    a. Control bleeding by direct pressure.

    b. Apply a tourniquet.

    c. Use Heimlich technique.

    d. Use resuscitator bag.

    e. Perform CPR (cardiopulmonary resuscitation).

    f. Prepare for nasogastric tube insertion.

    g. Apply dressings and bandages.

    h. Apply a splint.

    i. Examine eyes.

    j. Irrigate eyes.

    (NOTE: If activities 23-26 have not been finished before the test, ask your instructor when they should be completed.)

EMERGENCIES AND FIRST AID
UNIT VI

ANSWERS TO TEST

1.

a.	4	l.	13	w.	20
b.	1	m.	12	x.	24
c.	7	n.	23	y.	25
d.	3	o.	21	z.	26
e.	5	p.	17	aa.	27
f.	9	q.	15		
g.	2	r.	14		
h.	6	s.	22		
i.	8	t.	18		
j.	11	u.	19		
k.	10	v.	16		

2. a. May mean the difference between life and death
   b. May mean the difference between temporary and permanent injuries
   c. Trains one in what to do and what not to do in an emergency

3. Discussion should include:
   a. Accidents are the number-one cause of death
   b. There may not be time to wait for professional medical help after an accident
   c. Safety awareness needs to be promoted in the home, at work, and at play

4.

a.	4	d.	1
b.	2	e.	5
c.	6	f.	3

5. a. Temporal artery
   b. Facial artery
   c. Carotid artery
   d. Subclavian artery
   e. Brachial artery
   f. Ulnar and radial arteries
   g. Femoral artery
   h. Popliteal artery

6. a. 1
   b. 3
   c. 2
   d. 4
   e. 5
   f. 7
   g. 8
   h. 6
   i. 9
   j. 10

7. Description should include:

   a. Cleanse wound thoroughly

   b. Seek medical attention immediately if face or neck has been bitten

   c. If possible, restrain any animal that you may suspect of having rabies or to which you are not sure a rabies vaccine has been given

   d. Apply a dressing and limit movement of injured area by immobilization until seen by a doctor

8. b, d

9. a, b

10. a. Noncorrosive substance

    b. Strong acid

11. a, e

12. Description should include:

    a. Remove all contaminated clothing and flush all exposed areas thoroughly with soap and water

    b. Find source of irritation to determine what type of treatment is needed

    c. Apply mild lotion, such as calamine, if rash occurs

    d. Seek medical attention immediately if respiratory symptoms, such as difficulty in breathing or wheezing, occur

13. a, d, f, g

14. a, d, e

15. a. 3

    b. 2

    c. 1

16. a. 5
    b. 4
    c. 2
    d. 3
    e. 1
    f. 8
    g. 6
    h. 9
    i. 7

17. a. Treat according to severity of symptoms; if intake produces symptoms of shock, treat for shock

    b. Occasional dizziness, uncoordination, increased heart rate, reddening of eyes, throat irritation

    c. Depressants

    d. Increased heart rate, blood pressure, and temperature, dilated pupils, paranoid delusions, hallucinations, and a complete loss of emotional control

    e. Inhalants

    f. Arouse the victim; maintain open airway and normal body temperature; seek medical help immediately

    g. Confusion, disorganization, irritability, fear, aggressive and antisocial behavior, delusions, and hallucinations

    h. Tranquilizers

18. a. 2
    b. 1
    c. 2
    d. 3
    e. 2
    f. 1
    g. 1
    h. 2
    i. 2
    j. 3
    k. 2
    l. 3

19. a. 3
    b. 2
    c. 1

20. b, c, e, h

21. b, c, e, f, h, i

22. a. 1
    b. 2
    c. 3

23. Evaluated to the satisfaction of the instructor

24. Evaluated to the satisfaction of the instructor

25. Evaluated to the satisfaction of the instructor

26. Performance skills evaluated to the satisfaction of the instructor